DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION

Proposed Appropriation Language

For necessary expenses in carrying out the activities of the Energy Information Administration, [$72,644,000] *$75,000,000*, to remain available until expended.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(Tabular dollars in thousands, Narrative in whole dollars)

PROGRAM MISSION

On line and off the shelf, the Energy Information Administration (EIA) is the first place to go for the last word in energy information. The EIA is a leader in providing high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding. As part of EIA's strategic plan, the following goals have been set:

- Assure products and services are relevant to the needs of customers
- Assure data, analyses, and forecasts are of the highest quality
- Provide customers fast and easy access to public energy information
- As a performance driven organization, conduct business in an efficient and cost-effective manner
- Work together to achieve the full potential of a diverse workforce

As an independent statistical/analytical agency, EIA has two principal roles. First, EIA's primary responsibility is to conduct the functions required by statute. These functions include the development and maintenance of a comprehensive energy database, and the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors. EIA also prepares specific reports which are required by law. Second, EIA responds to inquiries for energy information. The primary customers of EIA services are public policymakers in the Department of Energy and the Congress. Customers include other agencies in the Executive branch and independent agencies of the Federal Government, State and local governments, the energy industry, educational institutions, the news media, and the public. To preserve credibility with this broad client base, EIA maintains its independence from policy development. Consequently, EIA's role is to provide data and perform analyses. EIA does not develop or take policy positions. EIA has analyzed, and will continue to analyze, policy proposals generated elsewhere. EIA's strategy is to make its broad mix of products and services available to its customers through the continued use of publications, and an expansion of electronic dissemination via the EIA web site and CD-ROM.

REQUEST

EIA's FY 2001 Congressional budget request is $75.0 million. This request is $2.4 million over our FY 2000 appropriation of $72.6 million and 11.4% below the FY 1995 appropriation of $84.6 million (or 18.8% below after adjusting for inflation). As can be seen in Figure 1, EIA's budget has undergone a dramatic decrease over the past two decades, resulting in a reduction of 57.5% (adjusted for inflation) since FY 1980. In FY 2001, EIA intends to continue our base program, enhance international analysis capabilities, begin work associated with assessing the accuracy and reliability of several energy data systems, continuing overhauling several survey frames and data systems, and seek further efficiency gains through the use of information processing and communications technologies.

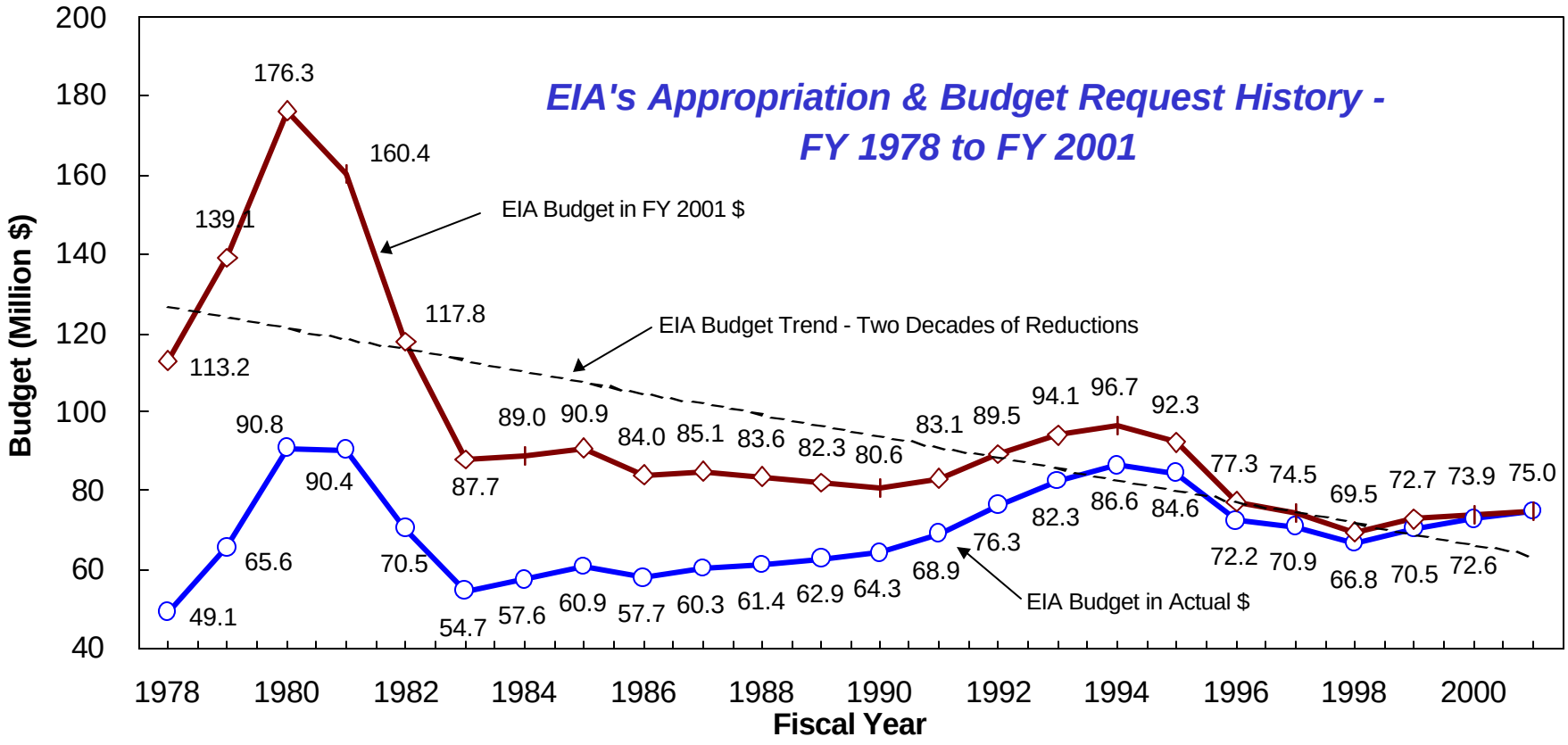

Figure 1

EIA continues to stand alone as the only statistical agency to absorb significant budget reductions since FY 1994 (see Figure 2). As one of the Federal Statistical Agencies, EIA has one of the smallest annual budgets, accounting for only 1.8% of the total FY 2000 U.S. statistical agencies budget requests (see Figure 3).

EIA has also absorbed significant Federal staff reductions. The work formerly done by these employees was not shifted to contractors, as EIA absorbed even greater reductions in contractor staff levels. Since 1995, EIA's total workforce, including both Federal and contractor employees, has decreased from approximately 1000 personnel to approximately 674 personnel in 1999, a 33% reduction.

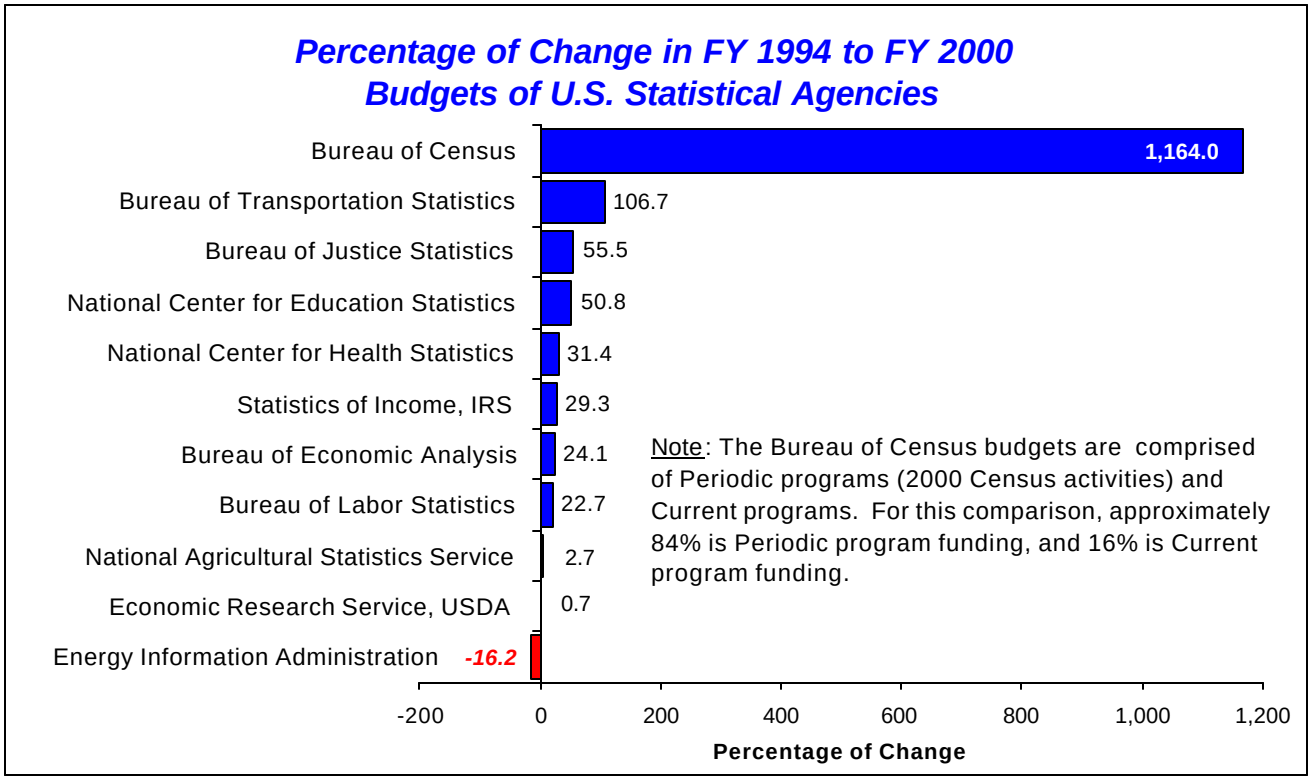

Figure 2

Base Program

In FY 2001, EIA's base program will consist of the maintenance of a comprehensive energy database, the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors, the maintenance of the National Energy Modeling System for midterm energy markets analysis and forecasting, the maintenance of the Short-Term Integrated Forecasting System for near-term energy market analysis and forecasting, customer forums and surveys to maintain an up-to-date product and service mix, and the continued expansion of electronic information dissemination via the EIA Web site and CD-ROM.

Program Investments

For FY 2001, EIA will continue to focus on: (1) The overhaul of EIA consumption surveys to update these 20-year-old surveys, (2) The overhaul of the natural gas and electricity surveys and data systems to recognize and accommodate the changes in the natural gas and electricity industries brought on by deregulation and restructuring. (3) Enhancement of EIA's international analysis capabilities in order to assess carbon mitigation, permit trading, and other global climate change issues. (4) Reversing the deterioration in data quality and accuracy in several energy areas.

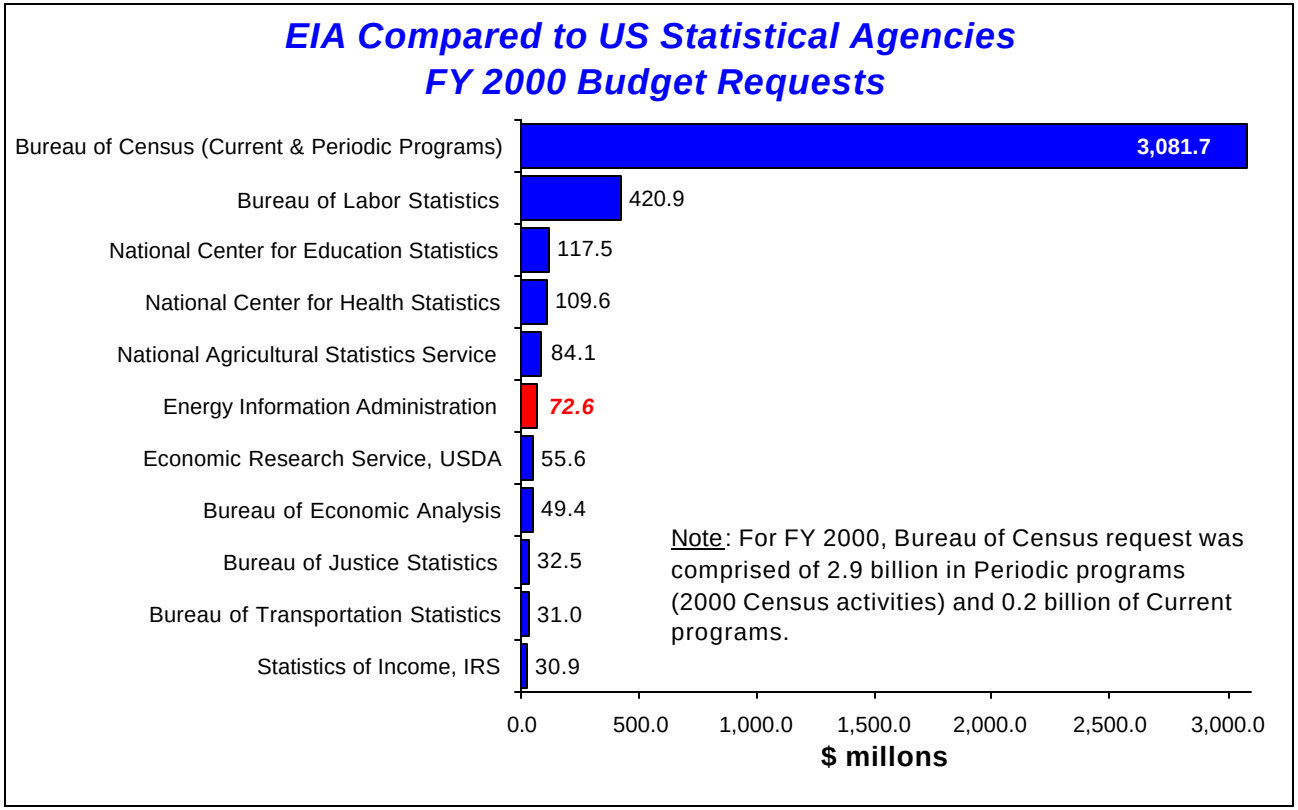

Figure 3

Initiatives

! Continue Overhaul of the Energy Consumption Surveys - Reconstructing a 20-year-old design.

EIA's energy consumption surveys are the Nation's most comprehensive source of data on energy use in major sectors of the United States economy. These surveys also include the characteristics of energy users. EIA presently has surveys in place covering 3 major sectors: households, commercial buildings, and manufacturers. The data from these surveys enlighten public policy debate on energy programs and issues, describe the potential markets for technology and energy efficiency improvements, and contribute to public understanding of energy use and its environmental impacts.

For several reasons, the consumption surveys will become more visible and critical over the next several years. Two principal reasons are: (1) The debate on greenhouse gas emissions and global warming potential will cause the United States, as well as other countries, to assess and understand the impact from major sources of emissions generated by human activity. (2) With the restructuring and deregulation of the electric and natural gas

industries, energy use and price data, especially at the consumers' level, are much more difficult to obtain from suppliers. This type of information will be especially useful to State governments, who are currently working with EIA and increasingly rely on EIA data to understand and effectively manage the current and emerging effects of energy industry restructuring's impact on energy consumers in their State.

In FY 2000, EIA initiated a redesign of the consumption surveys. This redesign initiative is critical because EIA's energy consumption surveys will have operated for more than 20 years based on the same statistical frame design. (Frame design is the complete population from which a statistically representative sample is drawn). This is far beyond the usual 10-year life-cycle tied to the census, but funding was not provided to update the surveys following the 1990 census. (Common statistical practice with complex area samples, especially those employing area-based designs, is to redesign after each decennial census to realign the coverage of the survey in order to reflect the current population demographics.) The sequential updating methodology used over the last 15+ years is a less than optimal method as compared to a decennial redesign in attempting to keep the current consumption surveys as up-to-date as possible. However, the performance and reliability measures of EIA's consumption surveys started to indicate deterioration. For example, commercial building square footage estimates from the 1995 Commercial Building Energy Consumption Survey declined from the level measured by the previous survey (Figure 4), a result at odds with all economic indicators of commercial activity.

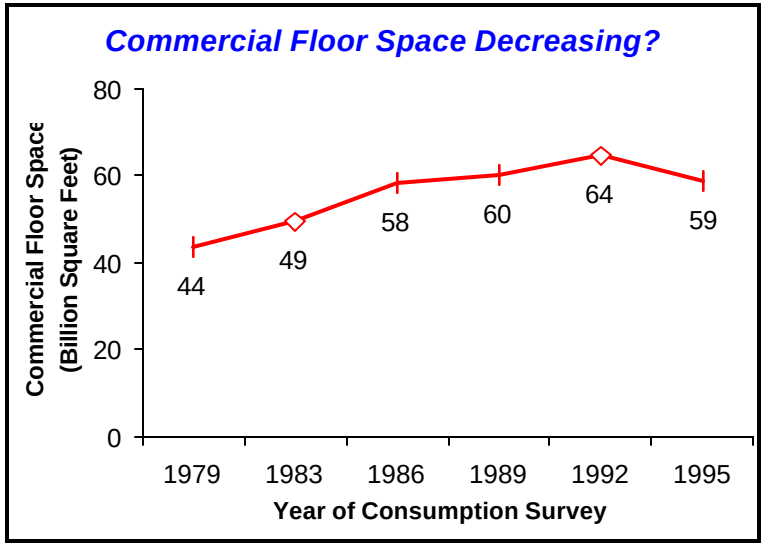

Figure 4

Funds will be used to continue support of Federal and contractor staff engaged in updating the survey frames and sampling. The redesign will realign the consumption surveys' coverage with the distribution of residential and commercial buildings populations as indicated by the 2000 census. Started in FY 2000, this multi-year effort within Energy Markets and End Use is expected to continue through FY 2001 and for three additional years, after which the updated sample design, survey frames, and data systems will be fully implemented. EIA estimates the cost for completing the consumption surveys redesign will be $600 thousand per year.

- Maintain Quality of Energy Consumption Data

Because of the increasing importance of consumer-based data, it is critical to maintain the quality of the data from these surveys. Starting with FY 2001, additional resources are needed to support the operation of these surveys. A permanent addition of $550 thousand in Energy Markets and End Use funding is needed to offset unavoidable increases in survey costs due to (1) the tight labor market for survey field workers; (2) the increasing amount of work needed to keep survey response rates high in the current cultural climate, with respondents increasingly more difficult to reach and more resistant to completing surveys; and (3) the need for expanded and more complex energy consumption and expenditures data collection procedures due to the more complex energy supply structure resulting from the natural gas and electric industry restructuring. Over the past several years, ongoing requirements for EIA to fund annually increasing survey costs from a decreasing budget have eroded EIA's capability to continue operating the three consumption surveys in a way that ensures high-quality data, and have required EIA to conduct these surveys once every four years.

If a permanent increase in EIA's operational base is not provided in FY 2001, EIA will need to choose one or more courses of action:

(1) Eliminate the personal interviews, changing to telephone or mail surveys and/or lengthen the time between surveys to 5 or more years. This course will increase levels of non-response, reduce callback efforts to convert non-respondents, and reduce editing and data cleanup activity. All of these outcomes will degrade the quality and integrity of the energy consumption data.

(2) Discontinue one of the surveys in order to maintain the quality of operations, and the resulting data, for the other two. This results in the loss of information in one of the consumption sectors.

- Continue Overhaul of the Electricity Surveys and Data Systems - Capturing Changes in a Restructured Industry.

In FY 1999, EIA initiated a multi-year effort to overhaul the surveys used to gather information from this nation’s restructuring of electricity generation and distribution. All of the EIA areas associated with electricity data collection, analysis, and reporting are undergoing significant revision and overhaul to reflect this evolving competitive industry. EIA will continue to make use of Federal and contractor staff to complete revision of the forms used to collect data, to develop new survey forms to reflect the unbundling of services, develop and implement new computer systems to process the information, and develop new data disclosure methods to protect the confidentiality of proprietary information. EIA estimates the FY 2001 and next year’s costs for the overhaul of the electricity surveys to be $1.0 million each year. To date EIA is on schedule with this effort, and plans to complete this endeavor in FY 2002 with the full implementation of the overhauled electricity data collection and reporting systems.

! Overhauls of Surveys and Data Systems Are Continuing in Order to Reflect Changes in the Restructured Natural Gas Industry.

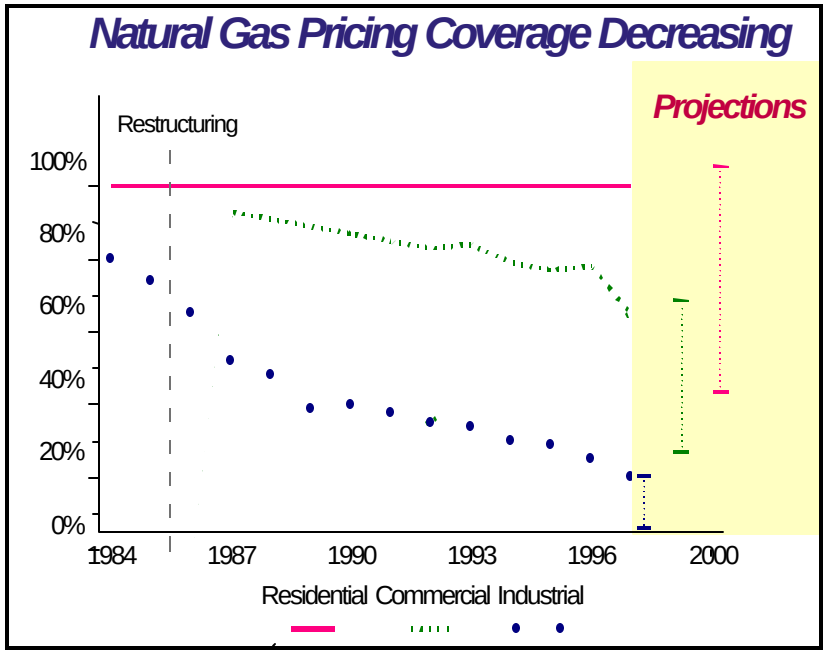

Figure 5

EIA's ability to provide data and information on the natural gas industry has been severely challenged by changes in the regulatory environment and corresponding industry restructuring. In FY 1998 for example, industrial price information for only 15% of the gas used by industrial customers was captured by EIA surveys, down from 75% coverage in FY 1984 (see Figure 5). Furthermore, coverage in the commercial areas dropped from more than 90% in FY 1987 to about 65% in FY 1998. With a move toward more competition at the retail level for residential and small commercial customers, coverage of the prices paid could be substantially reduced from the nearly 100% level of coverage we currently have. In addition, there are major segments of activity relating to prices and volumes for which no information is collected by EIA, such as the cost of underground storage, the cost of transportation, and price and physical transactions at market centers and market hubs.

Restructuring of the electric industry will also effect the information available on prices paid by electric generators for natural gas. Since natural gas is usually the swing fuel in electric generation, information on these prices is essential in understanding the fuel decisions made by electric generator operators and the subsequent impact on electricity prices. With the requested funding, EIA will continue to employ staff and contractors to progress on a three-phase plan to overhaul the natural gas surveys and data systems. The three phases are: (1) collect detailed information on the evolving structure and operation of the natural gas industry identifying critical data needs and sources; (2) develop and field test natural gas surveys and data systems; and (3) implement the overhauled natural gas survey and data systems. This multi-year overhaul of the natural gas data collection and data systems will continue for one more year when the updated systems are fully implemented. For FY 2001, EIA estimates the cost to continue the overhaul of the natural gas surveys and data systems to be $800K.

Starting with FY 2001, EIA is requesting a permanent increase of $175 thousand to provide the funding needed to address natural gas industry frames' (the universe of potential respondents) maintenance. With changes in the natural gas industry, maintaining frames for the existing populations has become increasingly difficult. This difficulty results from the new corporate entities being formed to market natural gas, as well as merger and consolidation activity in the industry. In addition, corporate downsizing and staff turnover has also increased the effort required by EIA to track changes in the industry. EIA Federal and contractor staff resources are not adequate to monitor the changing structure and rapidly changing market participants. To address these deficiencies, EIA needs to institute a higher level of frames' maintenance than was needed when the industry was regulated. With the requested increase, EIA would have the resources needed to: (1) monitor mergers, acquisitions, corporate reorganizations, and the

formation of new companies in the natural gas industry, (2) continually assess the impact of those corporate changes on reporting requirements, and (3) continually assess the impact of these ongoing corporate and industry changes on EIA's operation and processing of monthly and annual surveys.

! Continue Enhancement of International Energy Analysis Capabilities.

The requests for EIA to conduct carbon analysis and produce projections on the international level continue to increase. Currently, EIA's international modeling capability is unable to assess the economic consequences on the United States of energy-related compliance options, commitments, and actions of foreign countries. EIA does not have the policy analysis capabilities, or the capability to represent emissions trading between countries and/or regions. With the requested funding, EIA will continue to engage Federal staff and contractors in the development and/or acquisition of an international modeling capability to assess energy policies, technological change, and international carbon permit trading schemes. Started during FY 1999, the goal of this multi-year project is to acquire an international modeling capability, develop a framework for the modeling of international permit trading schemes using this capability, and ensure consistency with the U.S. projections from the National Energy Modeling System (NEMS). EIA plans to complete this initiative following two additional years of effort, at which time EIA will be in the position to provide reliable analysis and projections on international policies.

In FY 2001, EIA will develop a preliminary version of the model, System for Analysis of Global Energy Markets, based on the project requirements as defined in EIA's Report: "Design and Development Plan for the System for Analysis of Global Energy Markets". Also, in FY 2001, EIA will use this preliminary model to produce the forecasts for the International Energy Outlook 2001. The model methodologies will be enhanced over the next two fiscal years to represent the critical areas of regulation, technological improvement, and international carbon permit trading.

! Confront and Correct Critical Petroleum and Natural Gas Data Quality Issues.

(1) Weekly/Monthly Petroleum Supply Data Quality Control - The accuracy of petroleum supply and demand data is deteriorating. The loss of accuracy is the result of a long, slow deterioration in the quality of the data reported to the EIA that cannot be fully analyzed and corrected with the current level of resources. With the large volume of mergers, acquisitions, joint ventures, and company asset sales, EIA has found it increasingly difficult to track and monitor the changes in the industry while maintaining its petroleum frames (that is, up-to-date lists of potential respondents). EIA will engage Federal and contract staff to increase our efforts to identify the causes of the data quality deterioration, and implement processes to improve and maintain the high data quality needed to provide an accurate understanding of the petroleum industry and petroleum markets. Beginning in FY 2001, EIA estimates this project will take two years to complete.

(2) Petroleum Form Changes to Maintain Relevance - As environmental regulatory changes mandated under the Clean Air Act Amendments of 1990 are entering Tier II, new standards for low sulfur gasoline, national versus regional standards, low sulfur diesel, and other diesel specification changes will be implemented. In addition, environmental concerns over the use of ethers in gasoline, particularly MTBE, are leading to discussions of a ban on this significant gasoline component. These changes will necessitate changes in EIA's survey forms and reporting system as early as 2002. Starting in

FY 2001, the additional funding will support Federal and contractor staff to: (1) conduct analyses on the impact of these regulatory changes, and (2) modify survey reporting forms. Beginning in FY 2001, EIA projects this project will take two-years to complete.

The quality issues cited above are critical to the continuation of EIA's ability to provide accurate and timely petroleum information. If additional funding for these short-term initiatives and ongoing work is not made available, EIA proposes to terminate the operation of two State-level data surveys: the EIA-821, "Annual Fuel Oil and Kerosene Sales Report," and the EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption," and two crude surveys: the EIA-182, "Domestic Crude Oil First Purchase Report," and the EIA-856, "Monthly Foreign Crude Oil Acquisition Report." The resources needed to operate these surveys, would be used to begin addressing the required upgrades in the previously cited oil survey data and information processing systems.

(3) Quality & Timeliness of Natural Gas Production Data - EIA continues to witness a deterioration in the timeliness of responses to natural gas surveys. Although changes underway in survey design and approach should address most of these issues, in the interim, EIA has increasingly relied on imputation and early estimation procedures in order to release these data in a timely manner. The principal impediment to improved timeliness relates to the sources of the information, which relies on State agencies and the Minerals Management Service. These respondents collect information to support their core activities and then must synthesize information to develop abstracts in order to complete the EIA forms. This synthesis is a time-consuming process, which is a key contributing factor to the deterioration in the timely submission of data to EIA. For this task, EIA proposes to engage Federal and contractor staff to develop and implement improved methods of receiving reliable and timely data. Beginning in FY 2001, EIA estimates this project to take two-years to complete at $40 thousand for this year.

(4) Crude Oil Production System Redesign - This EIA information system is over ten-years old and needs to be reprogrammed in order to function within the current information technology base. EIA resources were significantly taxed to cope with poor and late data reporting and radical changes in price and production levels during 1998. This resulted in poorer oil production estimates, and the need for an unusual number of data revisions. Requested funding will be used by Federal and contractor staff to upgrade the system. The upgraded system will have the compatibility to interface with other EIA data systems, and provide the necessary flexibility, timeliness, and quality assurance to support the monthly and annual dissemination of oil production data at the State level. Beginning in FY 2001, EIA estimates the cost of this one-year project at $50 thousand.

(5) Update/Rewrite Oil and Gas Integrated Field File (OGIFF) System - EIA's OGIFF database is the premier U.S. tool for analyzing proved oil and gas reserves and ultimate recovery appreciation. The current system is over 10-years-old and is written in a data base language no longer supported. It is not cost effective to update the current system as the expertise is no longer available for this unsupported data base language. With the requested funding, EIA will engage Federal staff and contractors to rewrite the OGIFF system for operation on a contemporary SQL database. Starting in FY 2001, EIA estimates the cost of this one-year project at $130 thousand.

- Continued Development of Common Collection and Processing System (CCAPS) - Integrate Energy Surveys and Incorporating Data Collection.

EIA's is continuing the development and integration CCAPS survey data collection and processing. The goal is to significantly reduce data collection and processing costs, reduce software life-cycle costs, and to continually add value by improving the timeliness of energy information provided for EIA respondents and customers. To date, several coal and natural gas surveys have been transitioned into CCAPS. EIA plans to place these surveys in operation during the year 2000 survey cycle. During FY 2000, EIA will begin to transition the petroleum supply surveys. During FY 2001, EIA plans to complete the integration of the petroleum supply surveys into CCAPS, and begin work on the remaining EIA energy surveys' transition into the CCAPS data processing structure. In addition, EIA plans to start incorporating data collection into the CCAPS framework to enhance the efficient flow of energy data collection to processing. CCAPS will incorporate a variety of collection methods including Internet, mailed software (the successor to EIA's PEDRO), and mailed paper forms.

During FY 2001, EIA plans to start work on integrating a common data querying and extraction capability within CCAPS. With this capability, CCAPS will be able to calculate all the aggregates within and across surveys. CCAPS will also provide a flexible tool for developing drafts of modified or new tables being considered for dissemination. Once the development of CCAPS for survey data processing is complete, and in keeping with our Strategic Plan, it is EIA's plan to integrate an On-Line Analytical Processing (OLAP) capability to provide users easy access to the data. Initially, an OLAP system will be developed for EIA's Local Area Network (LAN) users, with the long-term goal of providing this capability to the public via the Internet. EIA estimates the cost in FY 2001 to pursue these CCAPS initiatives to be $500 thousand.

Efficiency Investments

EIA will continue to improve its base programs through investing in methods and integrating technologies that achieve efficiency gains. Over the past several years, EIA has invested in new, streamlined data systems, increased use of personal computers, enhanced local area networks, and upgraded servers and enterprise servers, to access, process, and disseminate information. EIA plans to continue these endeavors, with an increasing number of EIA products being disseminated only in electronic form. Other cost savings will occur through eliminating redundant practices, by continuously aligning our workforce of Federal and contractor staff to efficiently and effectively address EIA's evolving requirements. In addition, EIA will continue analyzing processes with the purpose of streamlining operations, reducing time requirements, retiring or replacing systems which are inefficient or no longer required, and consolidating program functions where efficiencies can be attained.

EIA Omnibus Procurement

With the purpose of improving EIA's contractor cost efficiency, the EIA Omnibus Procurement (EOP) was awarded in mid-December 1997. This action represents a fundamental change in the way EIA awards tasks. Prior to this initiative, EIA employed several contractors who were individually selected following a long competitive process. Tasks awarded to these contractors were on a cost-plus-fixed-fee basis. With a cost-plus-fixed-fee task, the actual cost of each task is not known until the work was completed, so the final costs of some cost-plus-fixed-fee tasks are higher than

expected. With the ability provided within the EOP to issue firm-fixed price tasks, EIA knows what a task will cost with far less potential for unexpected or unanticipated cost increases at the conclusion of the task.

The EOP award also supports EIA's Business Reengineering goals which promote continuous efficiency improvements. In addition, the EOP award supports the goals stated in the Federal Acquisition Streamlining Act (FASA) which promotes simplification of procurement and increased use of competition at the task level through the use of multi-award contracts. To pursue this contract efficiency initiative, EIA established a Procurement Planning Advisory Group. This group collaborated with the Department, the Office of Management and Budget, and the Small Business Administration, to investigate alternatives to improve EIA's task award cost effectiveness. The group's efforts resulted in the EOP.

The EOP is a multi-award contract with three functional areas: Information Management and Product Production, Energy Analysis and Forecasting, and Information Technology. With the EOP, small, 8(a), and small disadvantaged businesses having significant opportunities to contend for all competed task orders within their functional area. EIA started awarding task orders under the EOP in May 1998, with a goal of 10% being firm-fixed price task orders. For FY 1999, of the 143-task orders were awarded, 53% of the task orders are firm-fixed price.

With the EOP and competition at the task level, EIA is maximizing the opportunity to receive the best value for every tax dollar used to engage contractor support. In addition, the previous method of competing every individual contact was replaced with a more cost effective multi-award contract competition. As a forerunner in the Department of Energy headquarters in implementing a multi-award contract, EIA has lead the way for other parts of the Department considering this type of contracting to improve the efficiency and effective use of their contractor support.

STAFFING

In the Department of Energy's Workforce 21 Initiative, EIA's FY 2001 end-of-year Federal staffing level is 375 FTEs. EIA plans to rely on normal attrition and prioritized hiring to maintain Federal staffing level. With the revised Federal staff targets, and through the initiation of a staff replacement program, EIA will be able to address our projected deficits in industry expertise and leadership demographics.

For FY 2001, EIA's salary and benefit costs are estimated to be $35.130 million, or 47% of EIA's $75.0 million request. This estimate assumes an FY 2001 FTE level of 375, no reduction-in-force, OMB personnel cost projections, and a normal attrition rate.

EIA plans to continue the development of Federal staff capabilities to address EIA's future critical needs, and make economical and effective use of contractor support where appropriate. At requested resource levels, EIA estimates a reduction in use of contract support from a FY 1995 ratio of 1.0 Federal personnel to 1.2 contractor staff, to a 1.0 Federal personnel to 0.62 contractor staff. That is about a 50% reduction.

In conjunction with EIA's strategic planning process and workforce management endeavors, EIA will continually examine its staff skill mix and plans to assure future employee development and training needs are addressed. EIA will continue to accomplish its mission by continuously reassessing and realigning its portfolio of products and services, with an increasing reliance on Federal staffing, and the integration of evolving information management and communications technologies.

LINK TO DEPARTMENT STRATEGIC PLAN

As part of the Energy Resources Strategic Goal, DOE committed to "carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives." EIA is responsible for two action items to support this Departmental objective: (1) increasing the number of unique monthly users of EIA's Web Site, and (2) the dissemination of EIA's midterm forecasts as contained in the *Annual Energy Outlook*. Significant growth in the usage of EIA's Web Site is discussed in the section "Increasing Customer Usage." In FY 2001, EIA is planning to continue publishing the *Annual Energy Outlook*. These items are reflected in the DOE FY 2001 Annual Performance Plan as Item ER5-1.

PERFORMANCE RESULTS

EIA's major output is energy information. The purpose (outcome) of EIA's energy data collection, analysis and dissemination endeavors is to promote sound policymaking, efficient markets and public understanding. Because assessing the level of achievement of these ultimate outcomes is very difficult and costly, we approximate overall achievement of our mission by measuring customer satisfaction levels and product usage. EIA tracks product usage levels in many ways (number of Web site files downloads, number of publications mailed out, number of customers and the products they use, number of telephone inquiries, and number of media citations, etc.). EIA measures customer satisfaction through surveys and focus groups. Both customer satisfaction ratings and usage levels are significant. The results also show that while EIA is accomplishing our mission, has made improvements, and has a growing list of

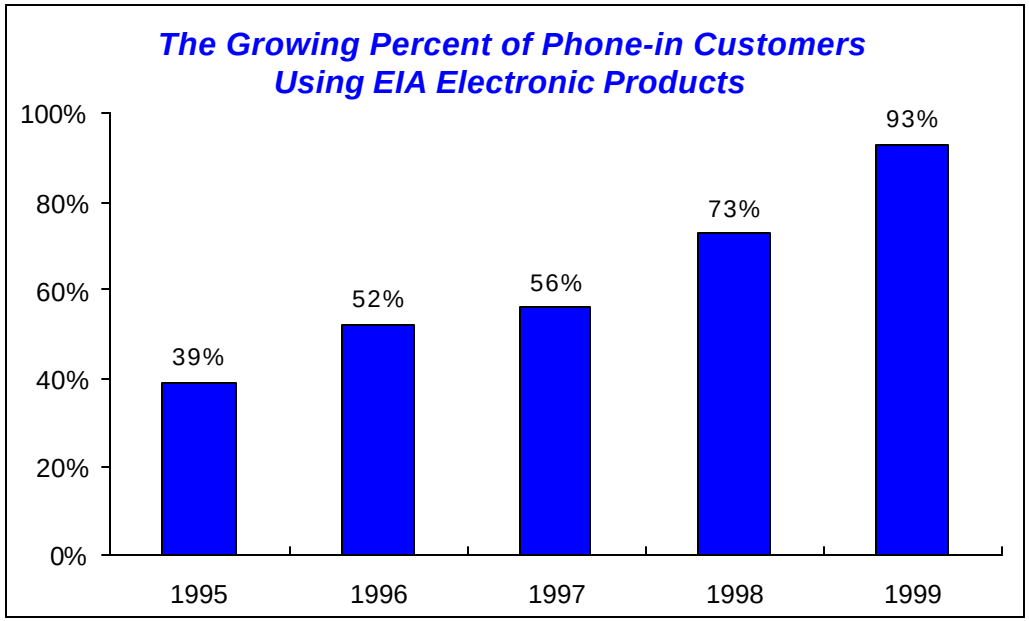

Figure 6

satisfied customers, there are still areas which can benefit from improvement. EIA's financial and market results indicated that in spite of overall reductions in both funding and staffing between FY 1995 and FY 1999, EIA has expanded our customer base and improved our products' attributes. Through large-scale electronic and media dissemination of our products, EIA has improved the availability of energy information while reducing printing and distribution costs. EIA will continue to focus on achieving higher levels of efficiency and effectiveness.

Customer Satisfaction and Survey Activities

EIA has conducted an annual survey of its telephone customers each year since FY 1995, establishing a continuing time series of performance results. EIA has also conducted surveys of users of its Web site, CD-ROM, and other energy data dissemination methods, and more than 2,000 recipients of EIA printed publications. In all of these surveys, customers are asked to rate their overall satisfaction, and rate EIA on five attributes of customer service (courtesy, promptness, accessibility, knowledge of the material, and ability to understand customer needs) and on five attributes of product quality (availability, relevance, accuracy, comprehensiveness, and timeliness).

In each year since FY 1995, at least 95% of EIA's telephone customers reported they were either satisfied or very satisfied with EIA's overall customer service. In addition, the number of customers using EIA electronic products has increased drastically (see Figure 6).

In terms of the EIA products' quality, telephone customer satisfaction ratings overall are also high (86% to 94%) over the past five years. Furthermore, a one-time question in 1997 was added (at the request of DOE's Office of Quality Management) which showed that 87% of telephone customers trusted EIA to provide a quality product to a "great extent" or "completely." However, among the five quality attributes, timeliness has historically had lower satisfaction scores. EIA has specifically targeted timeliness (which includes decreasing the time between when data are collected and when they are ready for dissemination, and increasing the speed of dissemination) as a key area of improvement. A new Web site customer survey to be fielded early in FY 2000 will follow-up with our customers on product timeliness improvement.

EIA collects energy data from respondents who are required to fill out survey forms. The more intuitive and understandable the forms, the higher quality the data. In 1998, EIA initiated three projects to redesign specific survey forms, one using focus groups and two using a technique called cognitive interviewing. This process involves respondents completing a survey with an interviewer while "thinking out loud," so the interviewer can see how they interact with the questionnaire and what meanings they get from terms and instructions. (Prior to 1998, EIA relied heavily on post-collection techniques, such as error checks and periodic expert reviews.) In June 1998, EIA used cognitive interviewing to test a redesign of the Manufacturing Energy Consumption Survey, prior to the 1999 data collection cycle. The revised version is longer but has a more intuitive design, and instructions printed throughout the survey directly in places where respondents need to read them (rather than in a separate booklet). In redesigning this survey, EIA conducted cognitive interviews at seven local manufacturing establishments, then revised the survey and pretested it. Respondents, who agreed to serve as pretest subjects, reported the revisions improved the survey design, the new format was easier to follow, and the additional length of the survey was not a concern.

EIA staff was trained in conducting cognitive interviews so these techniques can be used on other EIA data collections. In the near term, EIA plans to employ cognitive interviewing as a part of the information collection redesign efforts in the natural gas area. Building on these successes, EIA plans to make use of focus groups and cognitive interviewing as key processes in revamping energy surveys.

Increasing Customer Usage

EIA has engaged in an aggressive program to expand the availability of electronic information, upgrade energy data dissemination, and enhance coverage of energy information issues in the news media. This increased use of electronic technology (Internet, CD-ROM, etc.) for energy data dissemination has led to an explosive growth in the number of customers for our data, as well as increased the breadth of information distributed. For example, the growth in monthly users of EIA Web site is remarkable (see Figure 7 - note numbers of monthly users do not include EIA employees accessing the site). Rapid growth like that seen in the use of EIA's Web site access is evidenced in Web site file access. Of note, during 1997, EIA set a goal to increase the average number of unique monthly users of its web site by 20% annually, from a baseline of 37,000 users sessions. Between

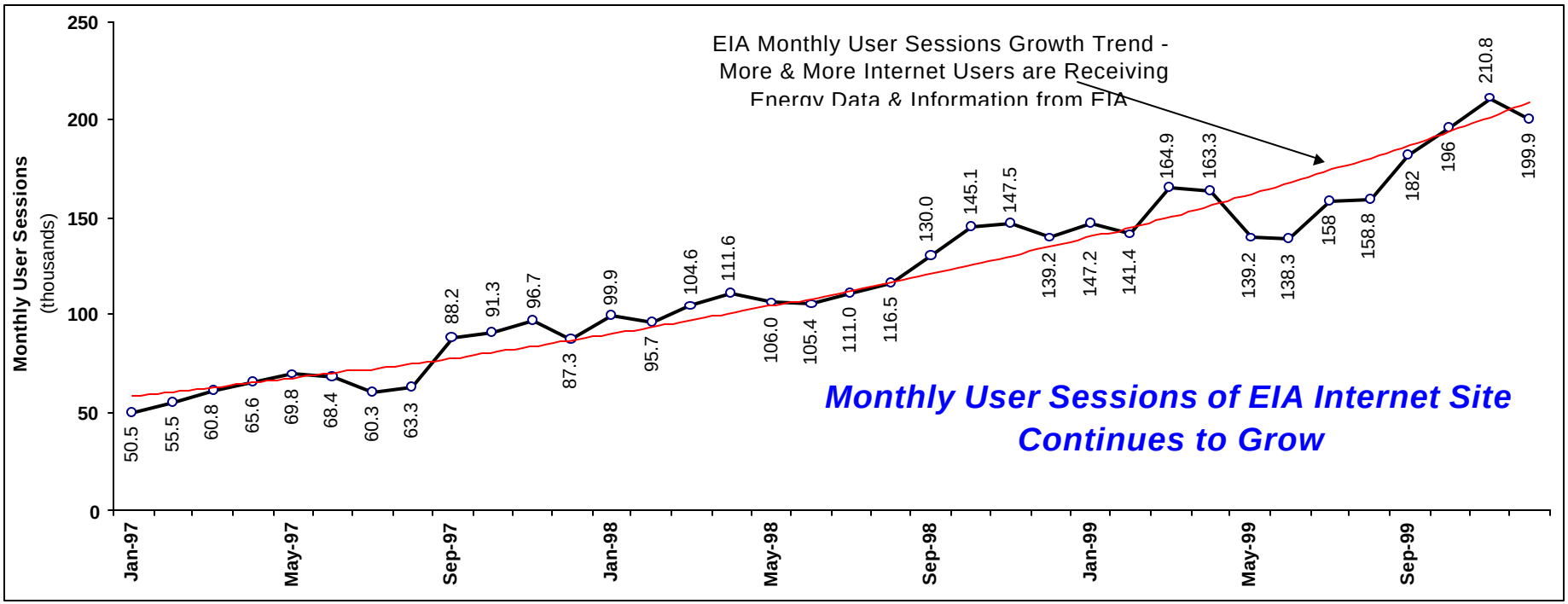

Figure 7

1996 to 1997 the growth in usage was 180%. By the end of 1997, EIA exceeded the goal with an average of 71,500 user sessions. By the end of 1998, EIA averaged 87,000 user sessions, again exceeding the goal. For 1999, EIA averaged 163,600 monthly user sessions, an increase of more than 64.7% when compared to the 1998 average monthly usage level. For December 1999 EIA was witnessing about 200,000 user sessions. For 1999, information downloaded from the EIA Web site averaged 94 gigabytes per month, or about 1.13 terabytes of energy information for the year. For December 1999, 1.4 million files were downloaded. This represents a 76% increase when compared to December 1998.

One result of the increase in the electronic availability of our information has been a dramatic increase in the number of customers contacting the National Energy Information Center for on-line support. For example, e-mail traffic is up nearly 114% between 1998 and 1999. Another result of our expanded use of electronic dissemination is a 35% reduction in the number of paper publications and a 50% reduction in publication printing costs since 1994, which results in avoiding more than $500,000 in expenditures per year.

EIA has dramatically increased the distribution of its information by becoming the dependable source of objective energy information for the news media. This has enabled our energy data to be widely use by the general public with minimal cost to the agency (Figure 8). In addition to the steady growth in media use of EIA information, public concern about price volatility in the gasoline and heating oil markets led to the increases in media citations in the spring of 1996, the winter of 1997, and the fall and winter of 1998-1999.

Another example of outcomes and impact, is the number of copies of EIA's recent brochure "Why Do Natural Gas Prices Fluctuate So Much?" being requested by natural gas companies for distribution to their customers. These natural gas companies see this brochure as an excellent way to explain to their customers why natural gas prices fluctuate. In addition, natural gas companies can note that this information was prepared by a non-biased source.

Perhaps the area most difficult to quantify is the impact of EIA's data on the policy development process. EIA has substantial evidence that our information and analyses are sought prior to legislative action. Most recently, as the restructuring of the electric power industry has moved to the front of the energy debate, EIA's briefing on how the industry works have been presented to more than 50 Congressional staff, principally from the Senate Energy and Natural Resources Committee. EIA's Administrator was requested to testify before the Energy and Power Subcommittee of the House of Representatives on future competitive electricity prices. EIA's brochure "The Restructuring of the Electric Power Industry - A Capsule of Issues and Events" which clarifies the complex issues involved, is one of the most popular files on our Web site with more than 2,000 printed copies distributed. EIA was requested by the Chairman and ranking minority member of the House Science Committee to prepare a study on the cost and economic impacts of proposed reductions in greenhouse gas emissions, in accordance with the Kyoto agreement. EIA believes the inclusion of our policy-neutral input on these major issues will help result in informed debate and sound policy decisions.

Of special note, EIA's Web site has won several awards for quality and content. Most recently, EIA's Web site was selected by *Government Executive* magazine as one of the best sixteen Federal Web sites for 1999, from 120 nominated web sites. In the announcement of the winners, *Government Executive* stated, "EIA is a tiny agency, so the comprehensiveness of its site - and its ease of navigation - amazed the judges. Everyone

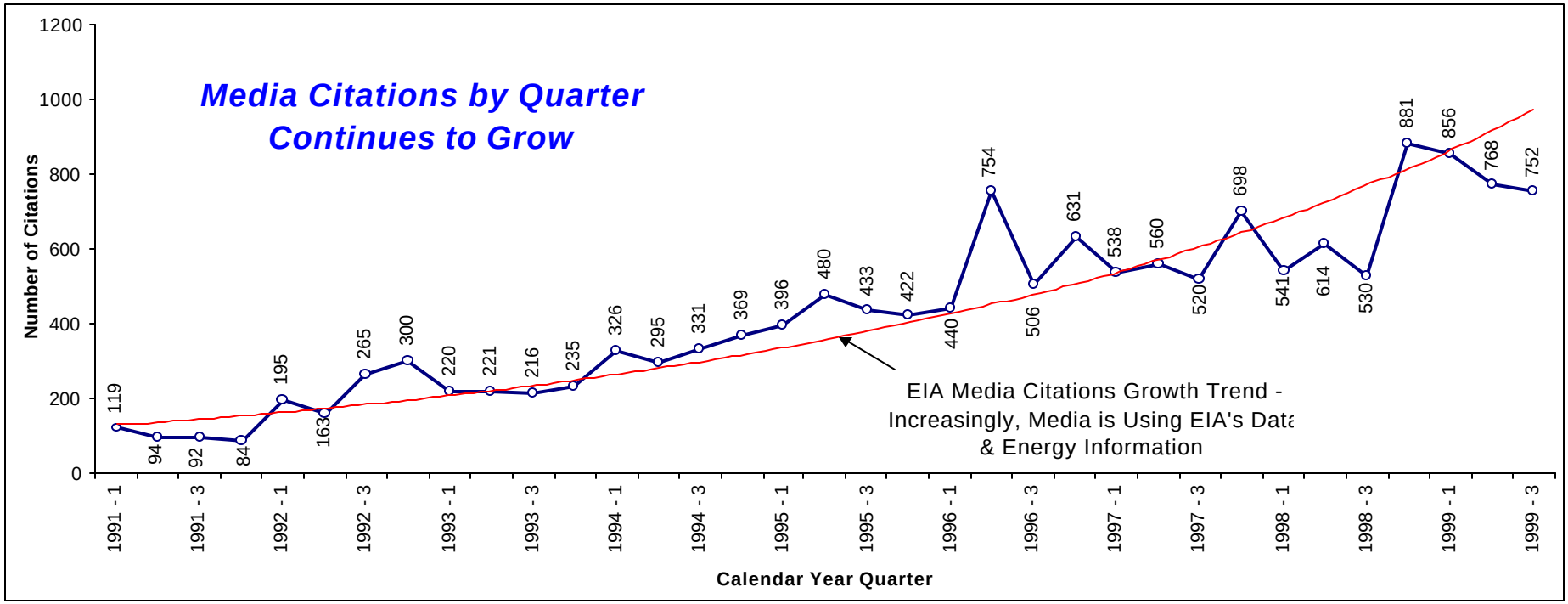

Figure 9

who works in the energy industry is well-served by this site." EIA also was commended for making full use of the power of e-mail by featuring e-mail notification lists for more than 30 different energy subjects.

In summary, EIA is serving a growing customer base, and achieving high levels of customer satisfaction with our energy data, analyses, forecasts, and timeliness. During FY 2001, EIA expects to receive 3 million inquires for energy information. To meet future customer requirements, EIA will need to leverage evolving information processing and communications technologies, explore and develop innovations to improve our capabilities, and align our resources to effectively meet the energy information needs of Government, industry, and the public.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(dollars in thousands)
PROGRAM FUNDING PROFILE
National Energy Information System

Activity	FY 1999 Enacted	FY 2000 Enacted [1]	FY 2001 Base	FY 2001 Request	Program Change Request vs. Base Dollar	Program Change Request vs. Base Percent
Oil and Gas						
Operating Expenses	$ 17,555	$ 18,197	$ 18,197	$ 19,249	$ 1,052	5.8%
Coal, Nuclear, Electric, and Alternate Fuels						
Operating Expenses	$ 9,979	$ 10,810	$ 10,810	$ 10,600	$ -210	-1.9%
Energy Markets and End Use						
Operating Expenses	$ 9,067	$ 9,845	$ 9,845	$ 10,355	$ 510	5.2%
Integrated Analysis and Forecasting						
Operating Expenses	$ 8,366	$ 9,112	$ 9,112	$ 9,122	$ 10	0.1%
Information Technology						
Operating Expenses	$ 9,795	$ 9,014	$ 9,014	$ 9,629	$ 615	6.8%
National Energy Information Center						
Operating Expenses	$ 2,199	$ 2,213	$ 2,213	$ 2,314	$ 101	4.6%
Statistics and Methods						
Operating Expenses	$ 2,255	$ 2,399	$ 2,399	$ 2,408	$ 9	0.4%
Resource Management						
Operating Expenses	$ 11,284	$ 10,778	$ 10,778	$ 11,323	$ 545	5.1%
SUBTOTAL	$ 70,500	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%
Use of Prior Year Balances [2]	- 315	- -	- -	- -	- -	- -
TOTAL	$ 70,185	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION

Proposed Appropriation Language

For necessary expenses in carrying out the activities of the Energy Information Administration, [$72,644,000] *$75,000,000*, to remain available until expended.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(Tabular dollars in thousands, Narrative in whole dollars)

PROGRAM MISSION

On line and off the shelf, the Energy Information Administration (EIA) is the first place to go for the last word in energy information. The EIA is a leader in providing high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding. As part of EIA's strategic plan, the following goals have been set:

- Assure products and services are relevant to the needs of customers
- Assure data, analyses, and forecasts are of the highest quality
- Provide customers fast and easy access to public energy information
- As a performance driven organization, conduct business in an efficient and cost-effective manner
- Work together to achieve the full potential of a diverse workforce

As an independent statistical/analytical agency, EIA has two principal roles. First, EIA's primary responsibility is to conduct the functions required by statute. These functions include the development and maintenance of a comprehensive energy database, and the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors. EIA also prepares specific reports which are required by law. Second, EIA responds to inquiries for energy information. The primary customers of EIA services are public policymakers in the Department of Energy and the Congress. Customers include other agencies in the Executive branch and independent agencies of the Federal Government, State and local governments, the energy industry, educational institutions, the news media, and the public. To preserve credibility with this broad client base, EIA maintains its independence from policy development. Consequently, EIA's role is to provide data and perform analyses. EIA does not develop or take policy positions. EIA has analyzed, and will continue to analyze, policy proposals generated elsewhere. EIA's strategy is to make its broad mix of products and services available to its customers through the continued use of publications, and an expansion of electronic dissemination via the EIA web site and CD-ROM.

REQUEST

EIA's FY 2001 Congressional budget request is $75.0 million. This request is $2.4 million over our FY 2000 appropriation of $72.6 million and 11.4% below the FY 1995 appropriation of $84.6 million (or 18.8% below after adjusting for inflation). As can be seen in Figure 1, EIA's budget has undergone a dramatic decrease over the past two decades, resulting in a reduction of 57.5% (adjusted for inflation) since FY 1980. In FY 2001, EIA intends to continue our base program, enhance international analysis capabilities, begin work associated with assessing the accuracy and reliability of several energy data systems, continuing overhauling several survey frames and data systems, and seek further efficiency gains through the use of information processing and communications technologies.

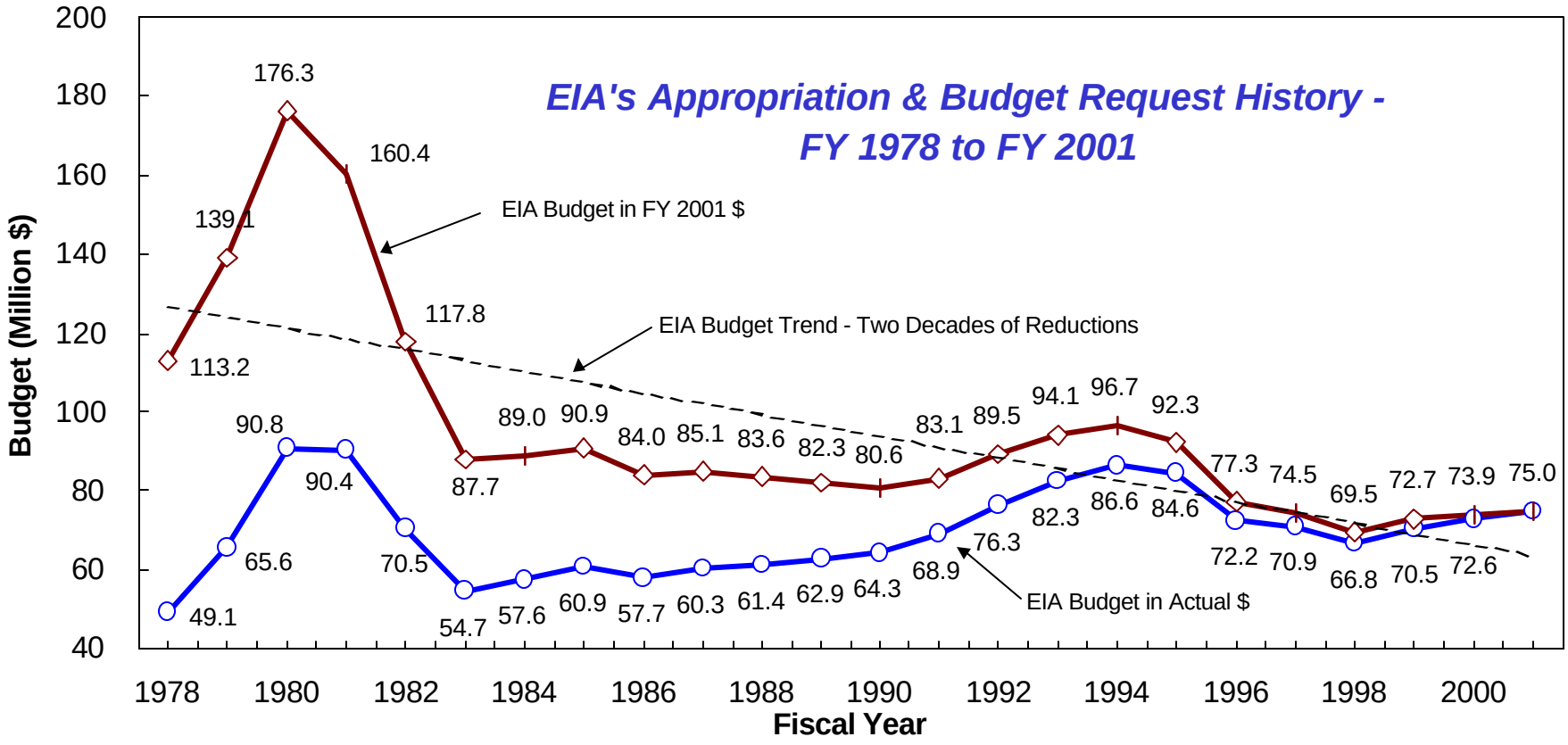

Figure 1

EIA continues to stand alone as the only statistical agency to absorb significant budget reductions since FY 1994 (see Figure 2). As one of the Federal Statistical Agencies, EIA has one of the smallest annual budgets, accounting for only 1.8% of the total FY 2000 U.S. statistical agencies budget requests (see Figure 3).

EIA has also absorbed significant Federal staff reductions. The work formerly done by these employees was not shifted to contractors, as EIA absorbed even greater reductions in contractor staff levels. Since 1995, EIA's total workforce, including both Federal and contractor employees, has decreased from approximately 1000 personnel to approximately 674 personnel in 1999, a 33% reduction.

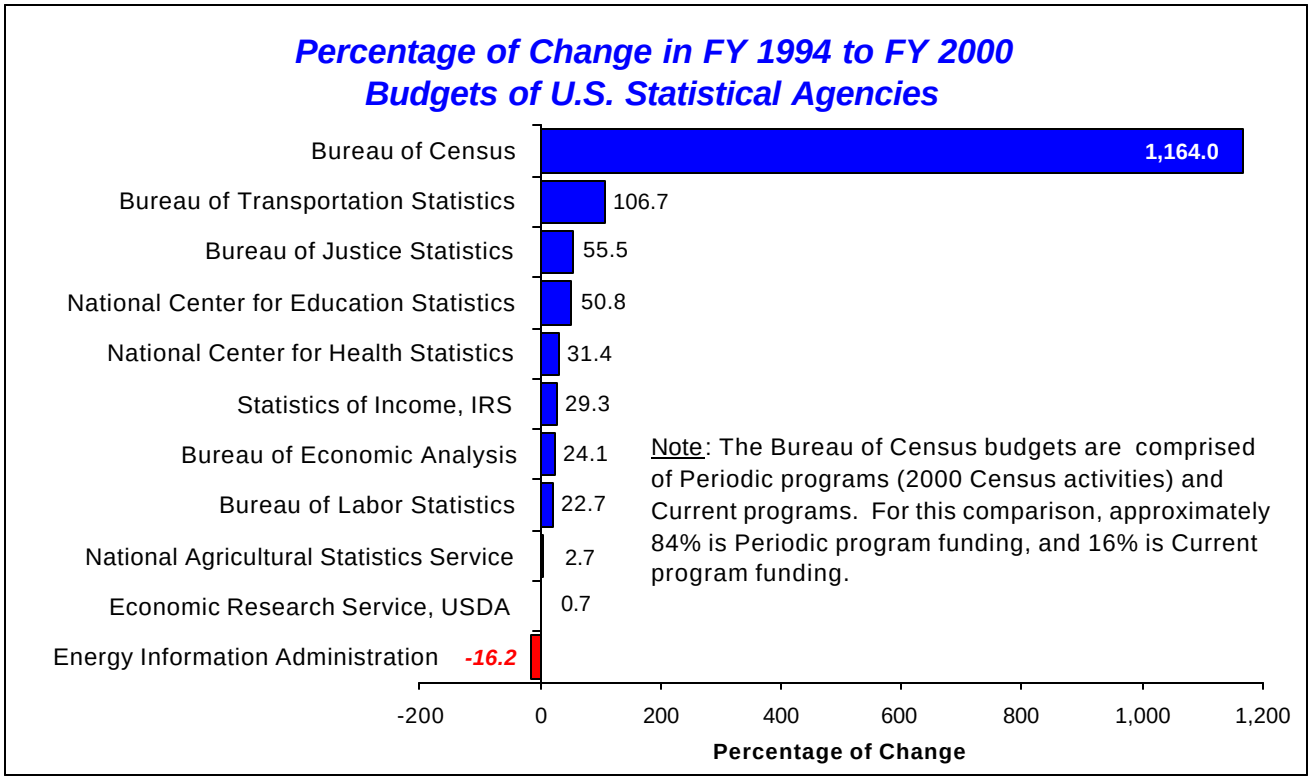

Figure 2

Base Program

In FY 2001, EIA's base program will consist of the maintenance of a comprehensive energy database, the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors, the maintenance of the National Energy Modeling System for midterm energy markets analysis and forecasting, the maintenance of the Short-Term Integrated Forecasting System for near-term energy market analysis and forecasting, customer forums and surveys to maintain an up-to-date product and service mix, and the continued expansion of electronic information dissemination via the EIA Web site and CD-ROM.

Program Investments

For FY 2001, EIA will continue to focus on: (1) The overhaul of EIA consumption surveys to update these 20-year-old surveys, (2) The overhaul of the natural gas and electricity surveys and data systems to recognize and accommodate the changes in the natural gas and electricity industries brought on by deregulation and restructuring. (3) Enhancement of EIA's international analysis capabilities in order to assess carbon mitigation, permit trading, and other global climate change issues. (4) Reversing the deterioration in data quality and accuracy in several energy areas.

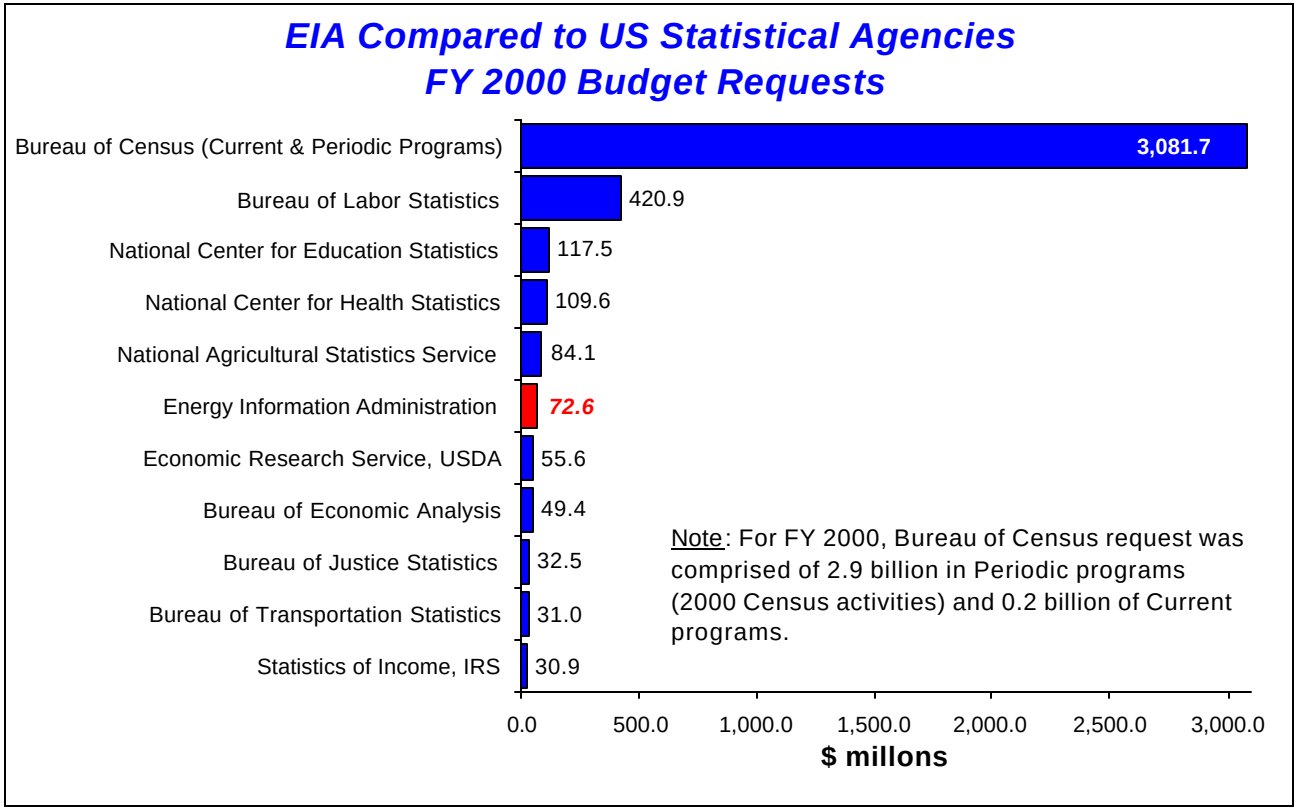

Figure 3

Initiatives

! Continue Overhaul of the Energy Consumption Surveys - Reconstructing a 20-year-old design.

EIA's energy consumption surveys are the Nation's most comprehensive source of data on energy use in major sectors of the United States economy. These surveys also include the characteristics of energy users. EIA presently has surveys in place covering 3 major sectors: households, commercial buildings, and manufacturers. The data from these surveys enlighten public policy debate on energy programs and issues, describe the potential markets for technology and energy efficiency improvements, and contribute to public understanding of energy use and its environmental impacts.

For several reasons, the consumption surveys will become more visible and critical over the next several years. Two principal reasons are: (1) The debate on greenhouse gas emissions and global warming potential will cause the United States, as well as other countries, to assess and understand the impact from major sources of emissions generated by human activity. (2) With the restructuring and deregulation of the electric and natural gas

industries, energy use and price data, especially at the consumers' level, are much more difficult to obtain from suppliers. This type of information will be especially useful to State governments, who are currently working with EIA and increasingly rely on EIA data to understand and effectively manage the current and emerging effects of energy industry restructuring's impact on energy consumers in their State.

In FY 2000, EIA initiated a redesign of the consumption surveys. This redesign initiative is critical because EIA's energy consumption surveys will have operated for more than 20 years based on the same statistical frame design. (Frame design is the complete population from which a statistically representative sample is drawn). This is far beyond the usual 10-year life-cycle tied to the census, but funding was not provided to update the surveys following the 1990 census. (Common statistical practice with complex area samples, especially those employing area-based designs, is to redesign after each decennial census to realign the coverage of the survey in order to reflect the current population demographics.) The sequential updating methodology used over the last 15+ years is a less than optimal method as compared to a decennial redesign in attempting to keep the current consumption surveys as up-to-date as possible. However, the performance and reliability measures of EIA's consumption surveys started to indicate deterioration. For example, commercial building square footage estimates from the 1995 Commercial Building Energy Consumption Survey declined from the level measured by the previous survey (Figure 4), a result at odds with all economic indicators of commercial activity.

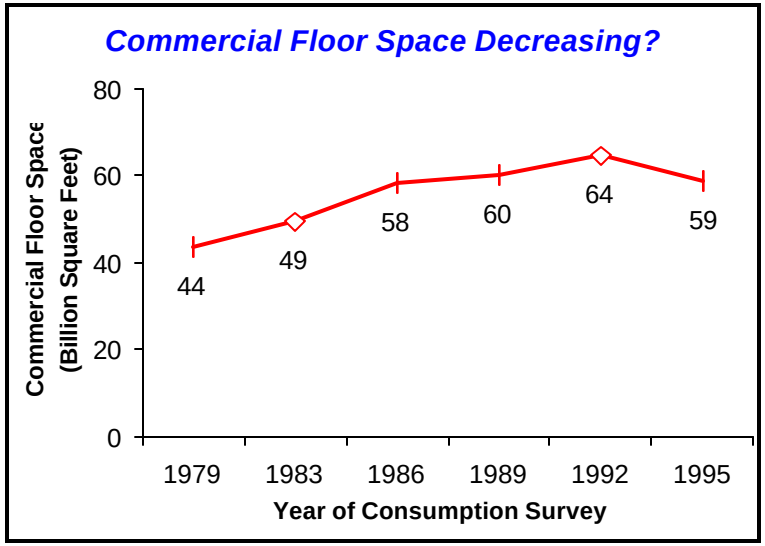

Figure 4

Funds will be used to continue support of Federal and contractor staff engaged in updating the survey frames and sampling. The redesign will realign the consumption surveys' coverage with the distribution of residential and commercial buildings populations as indicated by the 2000 census. Started in FY 2000, this multi-year effort within Energy Markets and End Use is expected to continue through FY 2001 and for three additional years, after which the updated sample design, survey frames, and data systems will be fully implemented. EIA estimates the cost for completing the consumption surveys redesign will be $600 thousand per year.

- Maintain Quality of Energy Consumption Data

Because of the increasing importance of consumer-based data, it is critical to maintain the quality of the data from these surveys. Starting with FY 2001, additional resources are needed to support the operation of these surveys. A permanent addition of $550 thousand in Energy Markets and End Use funding is needed to offset unavoidable increases in survey costs due to (1) the tight labor market for survey field workers; (2) the increasing amount of work needed to keep survey response rates high in the current cultural climate, with respondents increasingly more difficult to reach and more resistant to completing surveys; and (3) the need for expanded and more complex energy consumption and expenditures data collection procedures due to the more complex energy supply structure resulting from the natural gas and electric industry restructuring. Over the past several years, ongoing requirements for EIA to fund annually increasing survey costs from a decreasing budget have eroded EIA's capability to continue operating the three consumption surveys in a way that ensures high-quality data, and have required EIA to conduct these surveys once every four years.

If a permanent increase in EIA's operational base is not provided in FY 2001, EIA will need to choose one or more courses of action:

(1) Eliminate the personal interviews, changing to telephone or mail surveys and/or lengthen the time between surveys to 5 or more years. This course will increase levels of non-response, reduce callback efforts to convert non-respondents, and reduce editing and data cleanup activity. All of these outcomes will degrade the quality and integrity of the energy consumption data.

(2) Discontinue one of the surveys in order to maintain the quality of operations, and the resulting data, for the other two. This results in the loss of information in one of the consumption sectors.

- Continue Overhaul of the Electricity Surveys and Data Systems - Capturing Changes in a Restructured Industry.

In FY 1999, EIA initiated a multi-year effort to overhaul the surveys used to gather information from this nation’s restructuring of electricity generation and distribution. All of the EIA areas associated with electricity data collection, analysis, and reporting are undergoing significant revision and overhaul to reflect this evolving competitive industry. EIA will continue to make use of Federal and contractor staff to complete revision of the forms used to collect data, to develop new survey forms to reflect the unbundling of services, develop and implement new computer systems to process the information, and develop new data disclosure methods to protect the confidentiality of proprietary information. EIA estimates the FY 2001 and next year’s costs for the overhaul of the electricity surveys to be $1.0 million each year. To date EIA is on schedule with this effort, and plans to complete this endeavor in FY 2002 with the full implementation of the overhauled electricity data collection and reporting systems.

! Overhauls of Surveys and Data Systems Are Continuing in Order to Reflect Changes in the Restructured Natural Gas Industry.

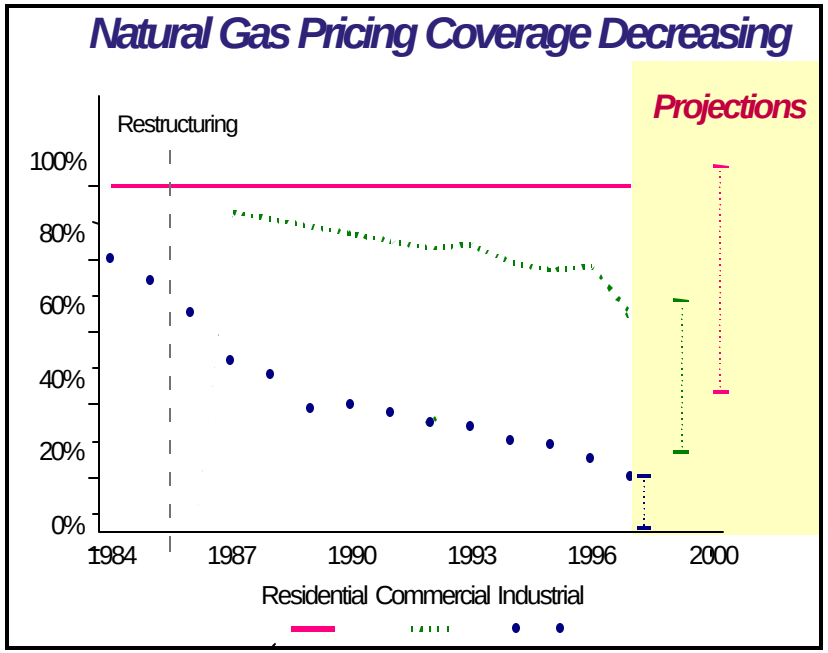

Figure 5

EIA's ability to provide data and information on the natural gas industry has been severely challenged by changes in the regulatory environment and corresponding industry restructuring. In FY 1998 for example, industrial price information for only 15% of the gas used by industrial customers was captured by EIA surveys, down from 75% coverage in FY 1984 (see Figure 5). Furthermore, coverage in the commercial areas dropped from more than 90% in FY 1987 to about 65% in FY 1998. With a move toward more competition at the retail level for residential and small commercial customers, coverage of the prices paid could be substantially reduced from the nearly 100% level of coverage we currently have. In addition, there are major segments of activity relating to prices and volumes for which no information is collected by EIA, such as the cost of underground storage, the cost of transportation, and price and physical transactions at market centers and market hubs.

Restructuring of the electric industry will also effect the information available on prices paid by electric generators for natural gas. Since natural gas is usually the swing fuel in electric generation, information on these prices is essential in understanding the fuel decisions made by electric generator operators and the subsequent impact on electricity prices. With the requested funding, EIA will continue to employ staff and contractors to progress on a three-phase plan to overhaul the natural gas surveys and data systems. The three phases are: (1) collect detailed information on the evolving structure and operation of the natural gas industry identifying critical data needs and sources; (2) develop and field test natural gas surveys and data systems; and (3) implement the overhauled natural gas survey and data systems. This multi-year overhaul of the natural gas data collection and data systems will continue for one more year when the updated systems are fully implemented. For FY 2001, EIA estimates the cost to continue the overhaul of the natural gas surveys and data systems to be $800K.

Starting with FY 2001, EIA is requesting a permanent increase of $175 thousand to provide the funding needed to address natural gas industry frames' (the universe of potential respondents) maintenance. With changes in the natural gas industry, maintaining frames for the existing populations has become increasingly difficult. This difficulty results from the new corporate entities being formed to market natural gas, as well as merger and consolidation activity in the industry. In addition, corporate downsizing and staff turnover has also increased the effort required by EIA to track changes in the industry. EIA Federal and contractor staff resources are not adequate to monitor the changing structure and rapidly changing market participants. To address these deficiencies, EIA needs to institute a higher level of frames' maintenance than was needed when the industry was regulated. With the requested increase, EIA would have the resources needed to: (1) monitor mergers, acquisitions, corporate reorganizations, and the

formation of new companies in the natural gas industry, (2) continually assess the impact of those corporate changes on reporting requirements, and (3) continually assess the impact of these ongoing corporate and industry changes on EIA's operation and processing of monthly and annual surveys.

! Continue Enhancement of International Energy Analysis Capabilities.

The requests for EIA to conduct carbon analysis and produce projections on the international level continue to increase. Currently, EIA's international modeling capability is unable to assess the economic consequences on the United States of energy-related compliance options, commitments, and actions of foreign countries. EIA does not have the policy analysis capabilities, or the capability to represent emissions trading between countries and/or regions. With the requested funding, EIA will continue to engage Federal staff and contractors in the development and/or acquisition of an international modeling capability to assess energy policies, technological change, and international carbon permit trading schemes. Started during FY 1999, the goal of this multi-year project is to acquire an international modeling capability, develop a framework for the modeling of international permit trading schemes using this capability, and ensure consistency with the U.S. projections from the National Energy Modeling System (NEMS). EIA plans to complete this initiative following two additional years of effort, at which time EIA will be in the position to provide reliable analysis and projections on international policies.

In FY 2001, EIA will develop a preliminary version of the model, System for Analysis of Global Energy Markets, based on the project requirements as defined in EIA's Report: "Design and Development Plan for the System for Analysis of Global Energy Markets". Also, in FY 2001, EIA will use this preliminary model to produce the forecasts for the International Energy Outlook 2001. The model methodologies will be enhanced over the next two fiscal years to represent the critical areas of regulation, technological improvement, and international carbon permit trading.

! Confront and Correct Critical Petroleum and Natural Gas Data Quality Issues.

(1) Weekly/Monthly Petroleum Supply Data Quality Control - The accuracy of petroleum supply and demand data is deteriorating. The loss of accuracy is the result of a long, slow deterioration in the quality of the data reported to the EIA that cannot be fully analyzed and corrected with the current level of resources. With the large volume of mergers, acquisitions, joint ventures, and company asset sales, EIA has found it increasingly difficult to track and monitor the changes in the industry while maintaining its petroleum frames (that is, up-to-date lists of potential respondents). EIA will engage Federal and contract staff to increase our efforts to identify the causes of the data quality deterioration, and implement processes to improve and maintain the high data quality needed to provide an accurate understanding of the petroleum industry and petroleum markets. Beginning in FY 2001, EIA estimates this project will take two years to complete.

(2) Petroleum Form Changes to Maintain Relevance - As environmental regulatory changes mandated under the Clean Air Act Amendments of 1990 are entering Tier II, new standards for low sulfur gasoline, national versus regional standards, low sulfur diesel, and other diesel specification changes will be implemented. In addition, environmental concerns over the use of ethers in gasoline, particularly MTBE, are leading to discussions of a ban on this significant gasoline component. These changes will necessitate changes in EIA's survey forms and reporting system as early as 2002. Starting in

FY 2001, the additional funding will support Federal and contractor staff to: (1) conduct analyses on the impact of these regulatory changes, and (2) modify survey reporting forms. Beginning in FY 2001, EIA projects this project will take two-years to complete.

The quality issues cited above are critical to the continuation of EIA's ability to provide accurate and timely petroleum information. If additional funding for these short-term initiatives and ongoing work is not made available, EIA proposes to terminate the operation of two State-level data surveys: the EIA-821, "Annual Fuel Oil and Kerosene Sales Report," and the EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption," and two crude surveys: the EIA-182, "Domestic Crude Oil First Purchase Report," and the EIA-856, "Monthly Foreign Crude Oil Acquisition Report." The resources needed to operate these surveys, would be used to begin addressing the required upgrades in the previously cited oil survey data and information processing systems.

(3) Quality & Timeliness of Natural Gas Production Data - EIA continues to witness a deterioration in the timeliness of responses to natural gas surveys. Although changes underway in survey design and approach should address most of these issues, in the interim, EIA has increasingly relied on imputation and early estimation procedures in order to release these data in a timely manner. The principal impediment to improved timeliness relates to the sources of the information, which relies on State agencies and the Minerals Management Service. These respondents collect information to support their core activities and then must synthesize information to develop abstracts in order to complete the EIA forms. This synthesis is a time-consuming process, which is a key contributing factor to the deterioration in the timely submission of data to EIA. For this task, EIA proposes to engage Federal and contractor staff to develop and implement improved methods of receiving reliable and timely data. Beginning in FY 2001, EIA estimates this project to take two-years to complete at $40 thousand for this year.

(4) Crude Oil Production System Redesign - This EIA information system is over ten-years old and needs to be reprogrammed in order to function within the current information technology base. EIA resources were significantly taxed to cope with poor and late data reporting and radical changes in price and production levels during 1998. This resulted in poorer oil production estimates, and the need for an unusual number of data revisions. Requested funding will be used by Federal and contractor staff to upgrade the system. The upgraded system will have the compatibility to interface with other EIA data systems, and provide the necessary flexibility, timeliness, and quality assurance to support the monthly and annual dissemination of oil production data at the State level. Beginning in FY 2001, EIA estimates the cost of this one-year project at $50 thousand.

(5) Update/Rewrite Oil and Gas Integrated Field File (OGIFF) System - EIA's OGIFF database is the premier U.S. tool for analyzing proved oil and gas reserves and ultimate recovery appreciation. The current system is over 10-years-old and is written in a data base language no longer supported. It is not cost effective to update the current system as the expertise is no longer available for this unsupported data base language. With the requested funding, EIA will engage Federal staff and contractors to rewrite the OGIFF system for operation on a contemporary SQL database. Starting in FY 2001, EIA estimates the cost of this one-year project at $130 thousand.

- Continued Development of Common Collection and Processing System (CCAPS) - Integrate Energy Surveys and Incorporating Data Collection.

EIA's is continuing the development and integration CCAPS survey data collection and processing. The goal is to significantly reduce data collection and processing costs, reduce software life-cycle costs, and to continually add value by improving the timeliness of energy information provided for EIA respondents and customers. To date, several coal and natural gas surveys have been transitioned into CCAPS. EIA plans to place these surveys in operation during the year 2000 survey cycle. During FY 2000, EIA will begin to transition the petroleum supply surveys. During FY 2001, EIA plans to complete the integration of the petroleum supply surveys into CCAPS, and begin work on the remaining EIA energy surveys' transition into the CCAPS data processing structure. In addition, EIA plans to start incorporating data collection into the CCAPS framework to enhance the efficient flow of energy data collection to processing. CCAPS will incorporate a variety of collection methods including Internet, mailed software (the successor to EIA's PEDRO), and mailed paper forms.

During FY 2001, EIA plans to start work on integrating a common data querying and extraction capability within CCAPS. With this capability, CCAPS will be able to calculate all the aggregates within and across surveys. CCAPS will also provide a flexible tool for developing drafts of modified or new tables being considered for dissemination. Once the development of CCAPS for survey data processing is complete, and in keeping with our Strategic Plan, it is EIA's plan to integrate an On-Line Analytical Processing (OLAP) capability to provide users easy access to the data. Initially, an OLAP system will be developed for EIA's Local Area Network (LAN) users, with the long-term goal of providing this capability to the public via the Internet. EIA estimates the cost in FY 2001 to pursue these CCAPS initiatives to be $500 thousand.

Efficiency Investments

EIA will continue to improve its base programs through investing in methods and integrating technologies that achieve efficiency gains. Over the past several years, EIA has invested in new, streamlined data systems, increased use of personal computers, enhanced local area networks, and upgraded servers and enterprise servers, to access, process, and disseminate information. EIA plans to continue these endeavors, with an increasing number of EIA products being disseminated only in electronic form. Other cost savings will occur through eliminating redundant practices, by continuously aligning our workforce of Federal and contractor staff to efficiently and effectively address EIA's evolving requirements. In addition, EIA will continue analyzing processes with the purpose of streamlining operations, reducing time requirements, retiring or replacing systems which are inefficient or no longer required, and consolidating program functions where efficiencies can be attained.

EIA Omnibus Procurement

With the purpose of improving EIA's contractor cost efficiency, the EIA Omnibus Procurement (EOP) was awarded in mid-December 1997. This action represents a fundamental change in the way EIA awards tasks. Prior to this initiative, EIA employed several contractors who were individually selected following a long competitive process. Tasks awarded to these contractors were on a cost-plus-fixed-fee basis. With a cost-plus-fixed-fee task, the actual cost of each task is not known until the work was completed, so the final costs of some cost-plus-fixed-fee tasks are higher than

expected. With the ability provided within the EOP to issue firm-fixed price tasks, EIA knows what a task will cost with far less potential for unexpected or unanticipated cost increases at the conclusion of the task.

The EOP award also supports EIA's Business Reengineering goals which promote continuous efficiency improvements. In addition, the EOP award supports the goals stated in the Federal Acquisition Streamlining Act (FASA) which promotes simplification of procurement and increased use of competition at the task level through the use of multi-award contracts. To pursue this contract efficiency initiative, EIA established a Procurement Planning Advisory Group. This group collaborated with the Department, the Office of Management and Budget, and the Small Business Administration, to investigate alternatives to improve EIA's task award cost effectiveness. The group's efforts resulted in the EOP.

The EOP is a multi-award contract with three functional areas: Information Management and Product Production, Energy Analysis and Forecasting, and Information Technology. With the EOP, small, 8(a), and small disadvantaged businesses having significant opportunities to contend for all competed task orders within their functional area. EIA started awarding task orders under the EOP in May 1998, with a goal of 10% being firm-fixed price task orders. For FY 1999, of the 143-task orders were awarded, 53% of the task orders are firm-fixed price.

With the EOP and competition at the task level, EIA is maximizing the opportunity to receive the best value for every tax dollar used to engage contractor support. In addition, the previous method of competing every individual contact was replaced with a more cost effective multi-award contract competition. As a forerunner in the Department of Energy headquarters in implementing a multi-award contract, EIA has lead the way for other parts of the Department considering this type of contracting to improve the efficiency and effective use of their contractor support.

STAFFING

In the Department of Energy's Workforce 21 Initiative, EIA's FY 2001 end-of-year Federal staffing level is 375 FTEs. EIA plans to rely on normal attrition and prioritized hiring to maintain Federal staffing level. With the revised Federal staff targets, and through the initiation of a staff replacement program, EIA will be able to address our projected deficits in industry expertise and leadership demographics.

For FY 2001, EIA's salary and benefit costs are estimated to be $35.130 million, or 47% of EIA's $75.0 million request. This estimate assumes an FY 2001 FTE level of 375, no reduction-in-force, OMB personnel cost projections, and a normal attrition rate.

EIA plans to continue the development of Federal staff capabilities to address EIA's future critical needs, and make economical and effective use of contractor support where appropriate. At requested resource levels, EIA estimates a reduction in use of contract support from a FY 1995 ratio of 1.0 Federal personnel to 1.2 contractor staff, to a 1.0 Federal personnel to 0.62 contractor staff. That is about a 50% reduction.

In conjunction with EIA's strategic planning process and workforce management endeavors, EIA will continually examine its staff skill mix and plans to assure future employee development and training needs are addressed. EIA will continue to accomplish its mission by continuously reassessing and realigning its portfolio of products and services, with an increasing reliance on Federal staffing, and the integration of evolving information management and communications technologies.

LINK TO DEPARTMENT STRATEGIC PLAN

As part of the Energy Resources Strategic Goal, DOE committed to "carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives." EIA is responsible for two action items to support this Departmental objective: (1) increasing the number of unique monthly users of EIA's Web Site, and (2) the dissemination of EIA's midterm forecasts as contained in the *Annual Energy Outlook*. Significant growth in the usage of EIA's Web Site is discussed in the section "Increasing Customer Usage." In FY 2001, EIA is planning to continue publishing the *Annual Energy Outlook*. These items are reflected in the DOE FY 2001 Annual Performance Plan as Item ER5-1.

PERFORMANCE RESULTS

EIA's major output is energy information. The purpose (outcome) of EIA's energy data collection, analysis and dissemination endeavors is to promote sound policymaking, efficient markets and public understanding. Because assessing the level of achievement of these ultimate outcomes is very difficult and costly, we approximate overall achievement of our mission by measuring customer satisfaction levels and product usage. EIA tracks product usage levels in many ways (number of Web site files downloads, number of publications mailed out, number of customers and the products they use, number of telephone inquiries, and number of media citations, etc.). EIA measures customer satisfaction through surveys and focus groups. Both customer satisfaction ratings and usage levels are significant. The results also show that while EIA is accomplishing our mission, has made improvements, and has a growing list of

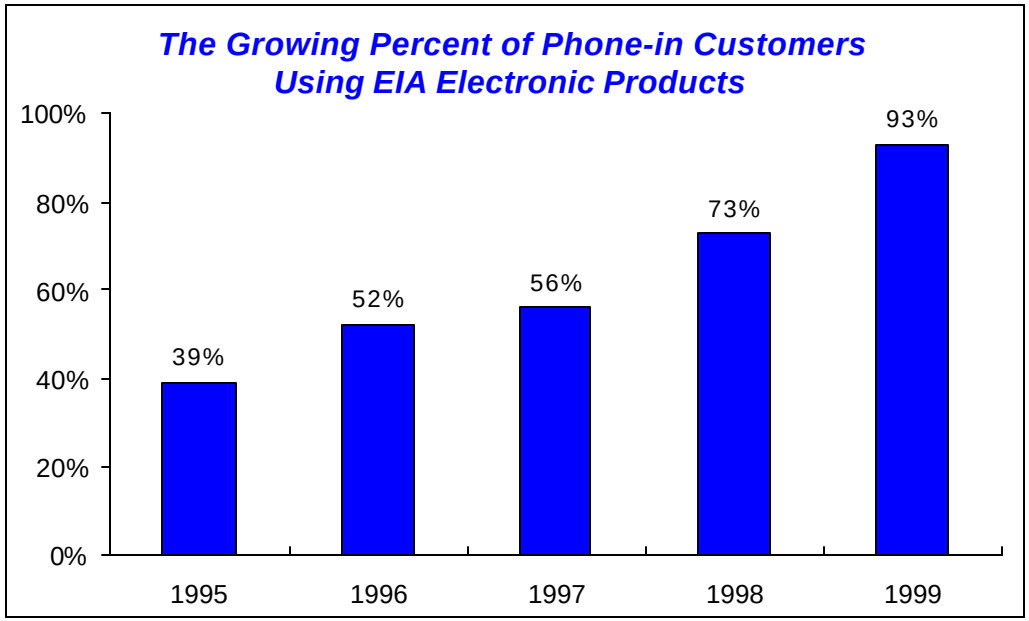

Figure 6

satisfied customers, there are still areas which can benefit from improvement. EIA's financial and market results indicated that in spite of overall reductions in both funding and staffing between FY 1995 and FY 1999, EIA has expanded our customer base and improved our products' attributes. Through large-scale electronic and media dissemination of our products, EIA has improved the availability of energy information while reducing printing and distribution costs. EIA will continue to focus on achieving higher levels of efficiency and effectiveness.

Customer Satisfaction and Survey Activities

EIA has conducted an annual survey of its telephone customers each year since FY 1995, establishing a continuing time series of performance results. EIA has also conducted surveys of users of its Web site, CD-ROM, and other energy data dissemination methods, and more than 2,000 recipients of EIA printed publications. In all of these surveys, customers are asked to rate their overall satisfaction, and rate EIA on five attributes of customer service (courtesy, promptness, accessibility, knowledge of the material, and ability to understand customer needs) and on five attributes of product quality (availability, relevance, accuracy, comprehensiveness, and timeliness).

In each year since FY 1995, at least 95% of EIA's telephone customers reported they were either satisfied or very satisfied with EIA's overall customer service. In addition, the number of customers using EIA electronic products has increased drastically (see Figure 6).

In terms of the EIA products' quality, telephone customer satisfaction ratings overall are also high (86% to 94%) over the past five years. Furthermore, a one-time question in 1997 was added (at the request of DOE's Office of Quality Management) which showed that 87% of telephone customers trusted EIA to provide a quality product to a "great extent" or "completely." However, among the five quality attributes, timeliness has historically had lower satisfaction scores. EIA has specifically targeted timeliness (which includes decreasing the time between when data are collected and when they are ready for dissemination, and increasing the speed of dissemination) as a key area of improvement. A new Web site customer survey to be fielded early in FY 2000 will follow-up with our customers on product timeliness improvement.

EIA collects energy data from respondents who are required to fill out survey forms. The more intuitive and understandable the forms, the higher quality the data. In 1998, EIA initiated three projects to redesign specific survey forms, one using focus groups and two using a technique called cognitive interviewing. This process involves respondents completing a survey with an interviewer while "thinking out loud," so the interviewer can see how they interact with the questionnaire and what meanings they get from terms and instructions. (Prior to 1998, EIA relied heavily on post-collection techniques, such as error checks and periodic expert reviews.) In June 1998, EIA used cognitive interviewing to test a redesign of the Manufacturing Energy Consumption Survey, prior to the 1999 data collection cycle. The revised version is longer but has a more intuitive design, and instructions printed throughout the survey directly in places where respondents need to read them (rather than in a separate booklet). In redesigning this survey, EIA conducted cognitive interviews at seven local manufacturing establishments, then revised the survey and pretested it. Respondents, who agreed to serve as pretest subjects, reported the revisions improved the survey design, the new format was easier to follow, and the additional length of the survey was not a concern.

EIA staff was trained in conducting cognitive interviews so these techniques can be used on other EIA data collections. In the near term, EIA plans to employ cognitive interviewing as a part of the information collection redesign efforts in the natural gas area. Building on these successes, EIA plans to make use of focus groups and cognitive interviewing as key processes in revamping energy surveys.

Increasing Customer Usage

EIA has engaged in an aggressive program to expand the availability of electronic information, upgrade energy data dissemination, and enhance coverage of energy information issues in the news media. This increased use of electronic technology (Internet, CD-ROM, etc.) for energy data dissemination has led to an explosive growth in the number of customers for our data, as well as increased the breadth of information distributed. For example, the growth in monthly users of EIA Web site is remarkable (see Figure 7 - note numbers of monthly users do not include EIA employees accessing the site). Rapid growth like that seen in the use of EIA's Web site access is evidenced in Web site file access. Of note, during 1997, EIA set a goal to increase the average number of unique monthly users of its web site by 20% annually, from a baseline of 37,000 users sessions. Between

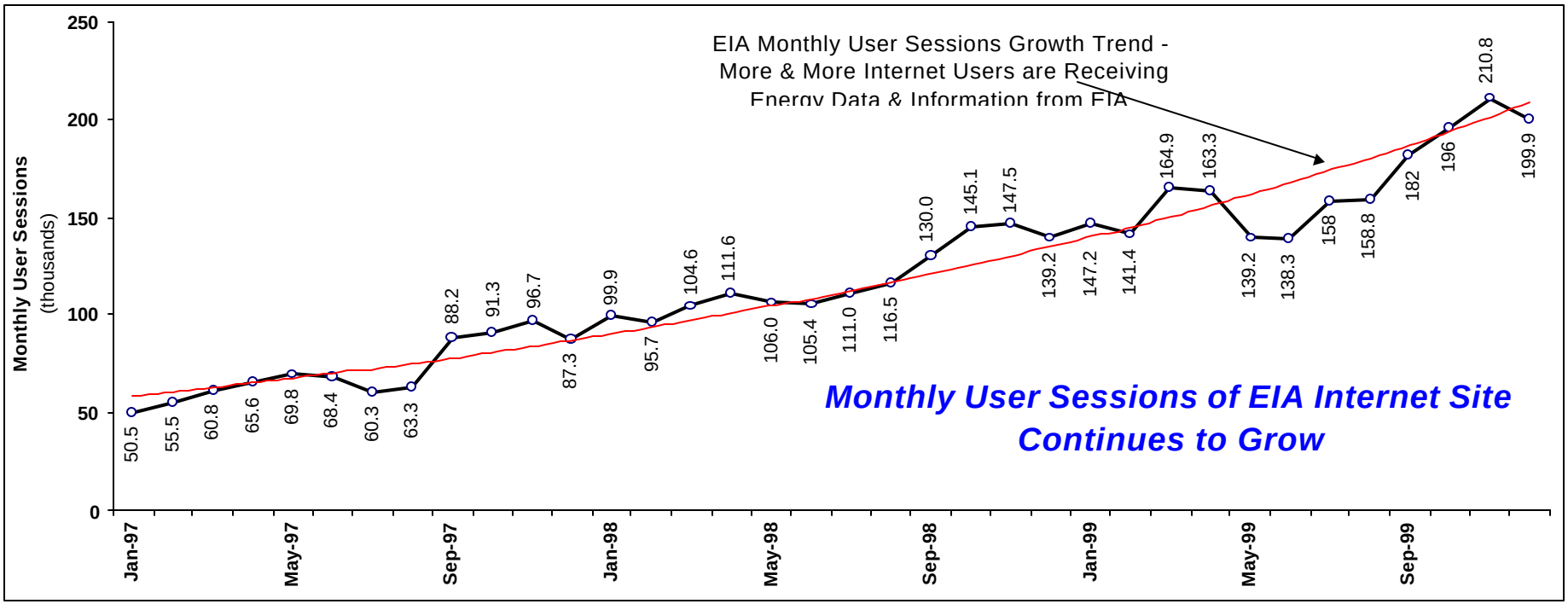

Figure 7

1996 to 1997 the growth in usage was 180%. By the end of 1997, EIA exceeded the goal with an average of 71,500 user sessions. By the end of 1998, EIA averaged 87,000 user sessions, again exceeding the goal. For 1999, EIA averaged 163,600 monthly user sessions, an increase of more than 64.7% when compared to the 1998 average monthly usage level. For December 1999 EIA was witnessing about 200,000 user sessions. For 1999, information downloaded from the EIA Web site averaged 94 gigabytes per month, or about 1.13 terabytes of energy information for the year. For December 1999, 1.4 million files were downloaded. This represents a 76% increase when compared to December 1998.

One result of the increase in the electronic availability of our information has been a dramatic increase in the number of customers contacting the National Energy Information Center for on-line support. For example, e-mail traffic is up nearly 114% between 1998 and 1999. Another result of our expanded use of electronic dissemination is a 35% reduction in the number of paper publications and a 50% reduction in publication printing costs since 1994, which results in avoiding more than $500,000 in expenditures per year.

EIA has dramatically increased the distribution of its information by becoming the dependable source of objective energy information for the news media. This has enabled our energy data to be widely use by the general public with minimal cost to the agency (Figure 8). In addition to the steady growth in media use of EIA information, public concern about price volatility in the gasoline and heating oil markets led to the increases in media citations in the spring of 1996, the winter of 1997, and the fall and winter of 1998-1999.

Another example of outcomes and impact, is the number of copies of EIA's recent brochure "Why Do Natural Gas Prices Fluctuate So Much?" being requested by natural gas companies for distribution to their customers. These natural gas companies see this brochure as an excellent way to explain to their customers why natural gas prices fluctuate. In addition, natural gas companies can note that this information was prepared by a non-biased source.

Perhaps the area most difficult to quantify is the impact of EIA's data on the policy development process. EIA has substantial evidence that our information and analyses are sought prior to legislative action. Most recently, as the restructuring of the electric power industry has moved to the front of the energy debate, EIA's briefing on how the industry works have been presented to more than 50 Congressional staff, principally from the Senate Energy and Natural Resources Committee. EIA's Administrator was requested to testify before the Energy and Power Subcommittee of the House of Representatives on future competitive electricity prices. EIA's brochure "The Restructuring of the Electric Power Industry - A Capsule of Issues and Events" which clarifies the complex issues involved, is one of the most popular files on our Web site with more than 2,000 printed copies distributed. EIA was requested by the Chairman and ranking minority member of the House Science Committee to prepare a study on the cost and economic impacts of proposed reductions in greenhouse gas emissions, in accordance with the Kyoto agreement. EIA believes the inclusion of our policy-neutral input on these major issues will help result in informed debate and sound policy decisions.

Of special note, EIA's Web site has won several awards for quality and content. Most recently, EIA's Web site was selected by *Government Executive* magazine as one of the best sixteen Federal Web sites for 1999, from 120 nominated web sites. In the announcement of the winners, *Government Executive* stated, "EIA is a tiny agency, so the comprehensiveness of its site - and its ease of navigation - amazed the judges. Everyone

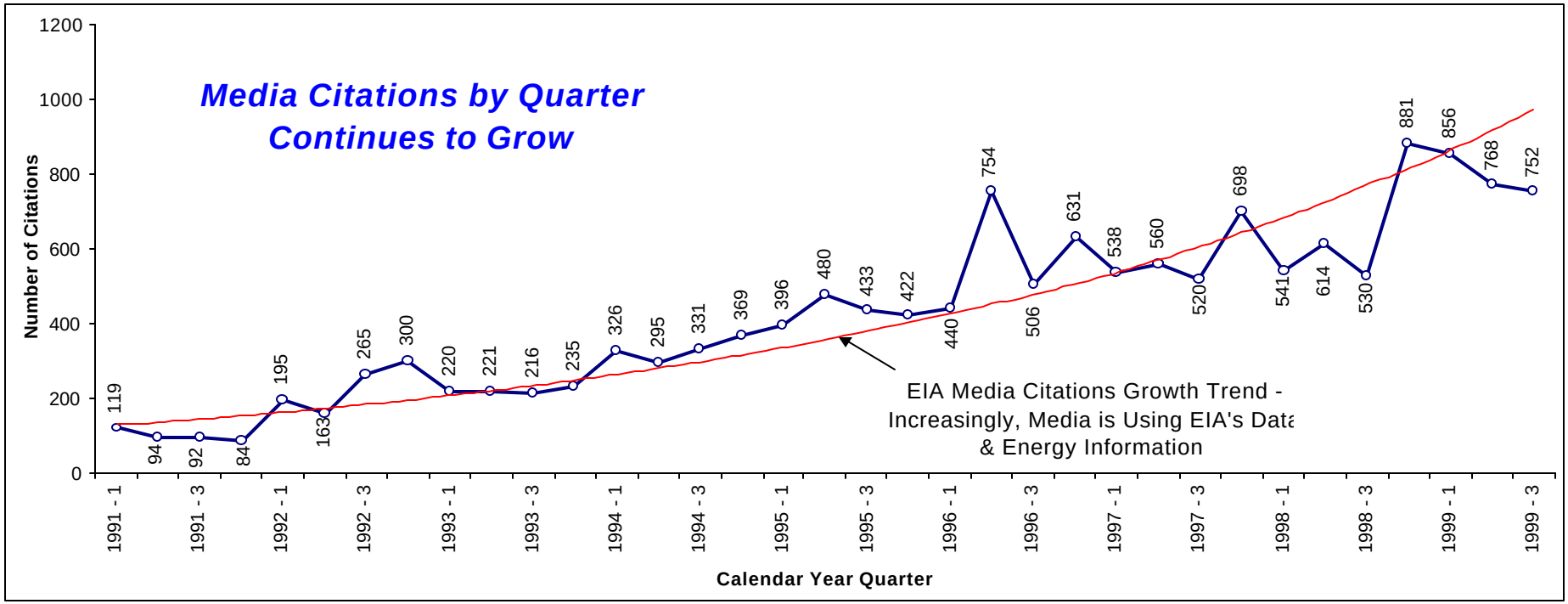

Figure 9

who works in the energy industry is well-served by this site." EIA also was commended for making full use of the power of e-mail by featuring e-mail notification lists for more than 30 different energy subjects.

In summary, EIA is serving a growing customer base, and achieving high levels of customer satisfaction with our energy data, analyses, forecasts, and timeliness. During FY 2001, EIA expects to receive 3 million inquires for energy information. To meet future customer requirements, EIA will need to leverage evolving information processing and communications technologies, explore and develop innovations to improve our capabilities, and align our resources to effectively meet the energy information needs of Government, industry, and the public.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(dollars in thousands)
PROGRAM FUNDING PROFILE
National Energy Information System

Activity	FY 1999 Enacted	FY 2000 Enacted [1]	FY 2001 Base	FY 2001 Request	Program Change Request vs. Base Dollar	Program Change Request vs. Base Percent
Oil and Gas						
Operating Expenses	$ 17,555	$ 18,197	$ 18,197	$ 19,249	$ 1,052	5.8%
Coal, Nuclear, Electric, and Alternate Fuels						
Operating Expenses	$ 9,979	$ 10,810	$ 10,810	$ 10,600	$ -210	-1.9%
Energy Markets and End Use						
Operating Expenses	$ 9,067	$ 9,845	$ 9,845	$ 10,355	$ 510	5.2%
Integrated Analysis and Forecasting						
Operating Expenses	$ 8,366	$ 9,112	$ 9,112	$ 9,122	$ 10	0.1%
Information Technology						
Operating Expenses	$ 9,795	$ 9,014	$ 9,014	$ 9,629	$ 615	6.8%
National Energy Information Center						
Operating Expenses	$ 2,199	$ 2,213	$ 2,213	$ 2,314	$ 101	4.6%
Statistics and Methods						
Operating Expenses	$ 2,255	$ 2,399	$ 2,399	$ 2,408	$ 9	0.4%
Resource Management						
Operating Expenses	$ 11,284	$ 10,778	$ 10,778	$ 11,323	$ 545	5.1%
SUBTOTAL	$ 70,500	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%
Use of Prior Year Balances [2]	- 315	- -	- -	- -	- -	- -
TOTAL	$ 70,185	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION

Proposed Appropriation Language

For necessary expenses in carrying out the activities of the Energy Information Administration, [$72,644,000] *$75,000,000*, to remain available until expended.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(Tabular dollars in thousands, Narrative in whole dollars)

PROGRAM MISSION

On line and off the shelf, the Energy Information Administration (EIA) is the first place to go for the last word in energy information. The EIA is a leader in providing high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding. As part of EIA's strategic plan, the following goals have been set:

- Assure products and services are relevant to the needs of customers
- Assure data, analyses, and forecasts are of the highest quality
- Provide customers fast and easy access to public energy information
- As a performance driven organization, conduct business in an efficient and cost-effective manner
- Work together to achieve the full potential of a diverse workforce

As an independent statistical/analytical agency, EIA has two principal roles. First, EIA's primary responsibility is to conduct the functions required by statute. These functions include the development and maintenance of a comprehensive energy database, and the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors. EIA also prepares specific reports which are required by law. Second, EIA responds to inquiries for energy information. The primary customers of EIA services are public policymakers in the Department of Energy and the Congress. Customers include other agencies in the Executive branch and independent agencies of the Federal Government, State and local governments, the energy industry, educational institutions, the news media, and the public. To preserve credibility with this broad client base, EIA maintains its independence from policy development. Consequently, EIA's role is to provide data and perform analyses. EIA does not develop or take policy positions. EIA has analyzed, and will continue to analyze, policy proposals generated elsewhere. EIA's strategy is to make its broad mix of products and services available to its customers through the continued use of publications, and an expansion of electronic dissemination via the EIA web site and CD-ROM.

REQUEST

EIA's FY 2001 Congressional budget request is $75.0 million. This request is $2.4 million over our FY 2000 appropriation of $72.6 million and 11.4% below the FY 1995 appropriation of $84.6 million (or 18.8% below after adjusting for inflation). As can be seen in Figure 1, EIA's budget has undergone a dramatic decrease over the past two decades, resulting in a reduction of 57.5% (adjusted for inflation) since FY 1980. In FY 2001, EIA intends to continue our base program, enhance international analysis capabilities, begin work associated with assessing the accuracy and reliability of several energy data systems, continuing overhauling several survey frames and data systems, and seek further efficiency gains through the use of information processing and communications technologies.

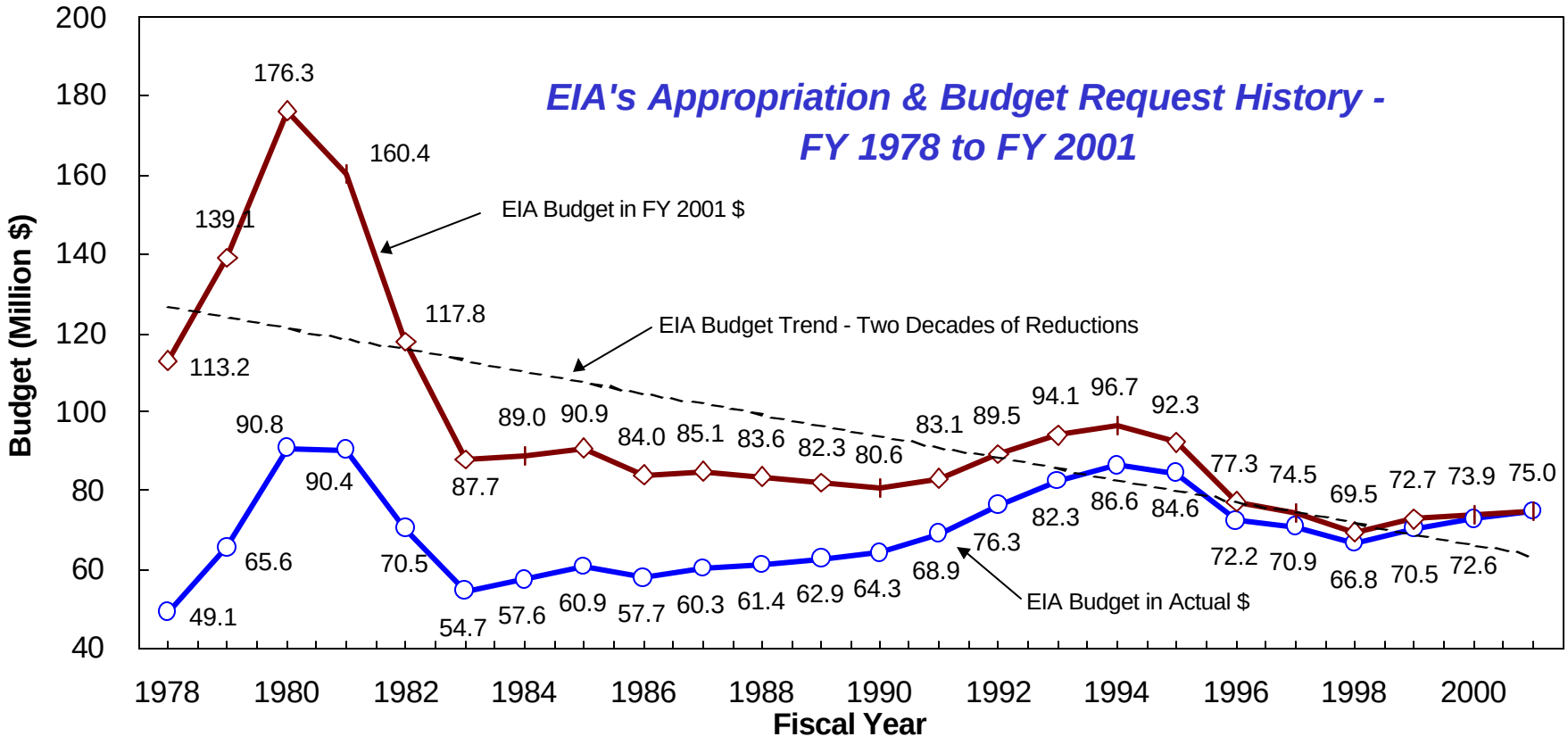

Figure 1

EIA continues to stand alone as the only statistical agency to absorb significant budget reductions since FY 1994 (see Figure 2). As one of the Federal Statistical Agencies, EIA has one of the smallest annual budgets, accounting for only 1.8% of the total FY 2000 U.S. statistical agencies budget requests (see Figure 3).

EIA has also absorbed significant Federal staff reductions. The work formerly done by these employees was not shifted to contractors, as EIA absorbed even greater reductions in contractor staff levels. Since 1995, EIA's total workforce, including both Federal and contractor employees, has decreased from approximately 1000 personnel to approximately 674 personnel in 1999, a 33% reduction.

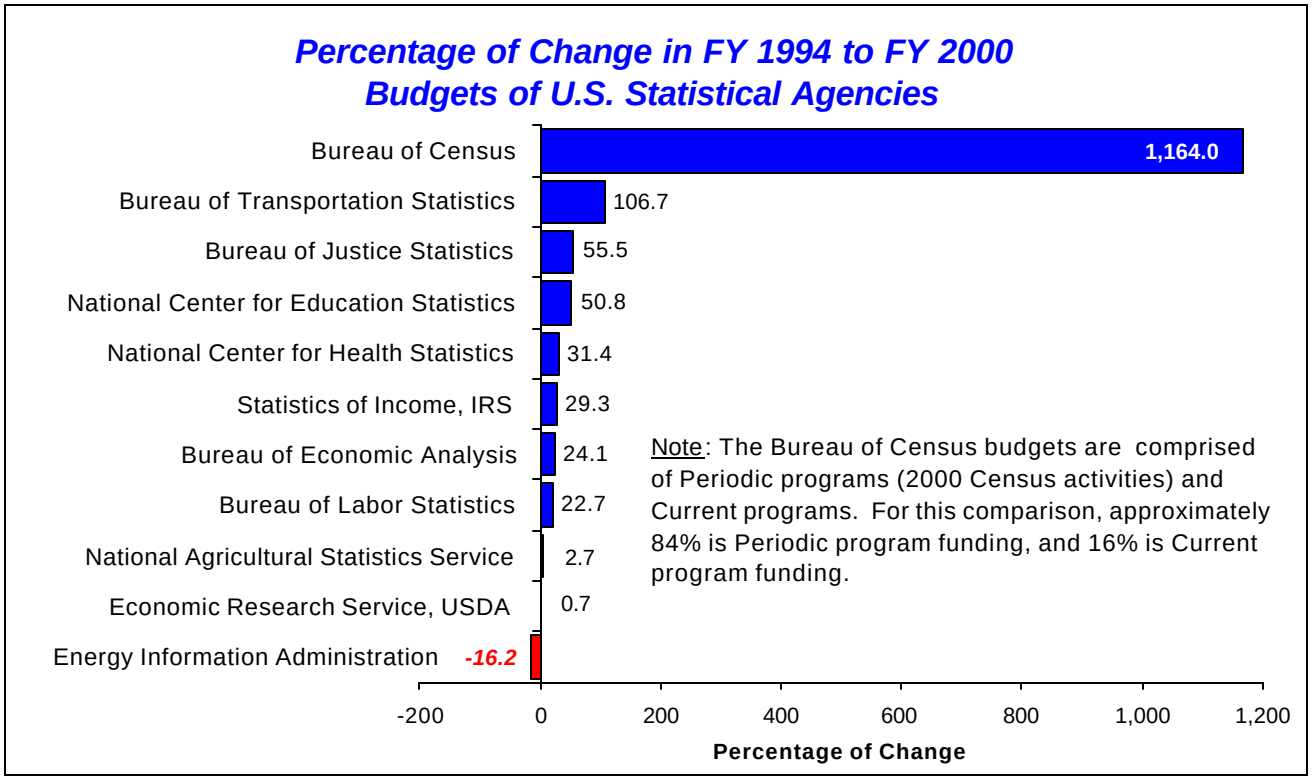

Figure 2

Base Program

In FY 2001, EIA's base program will consist of the maintenance of a comprehensive energy database, the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors, the maintenance of the National Energy Modeling System for midterm energy markets analysis and forecasting, the maintenance of the Short-Term Integrated Forecasting System for near-term energy market analysis and forecasting, customer forums and surveys to maintain an up-to-date product and service mix, and the continued expansion of electronic information dissemination via the EIA Web site and CD-ROM.

Program Investments

For FY 2001, EIA will continue to focus on: (1) The overhaul of EIA consumption surveys to update these 20-year-old surveys, (2) The overhaul of the natural gas and electricity surveys and data systems to recognize and accommodate the changes in the natural gas and electricity industries brought on by deregulation and restructuring. (3) Enhancement of EIA's international analysis capabilities in order to assess carbon mitigation, permit trading, and other global climate change issues. (4) Reversing the deterioration in data quality and accuracy in several energy areas.

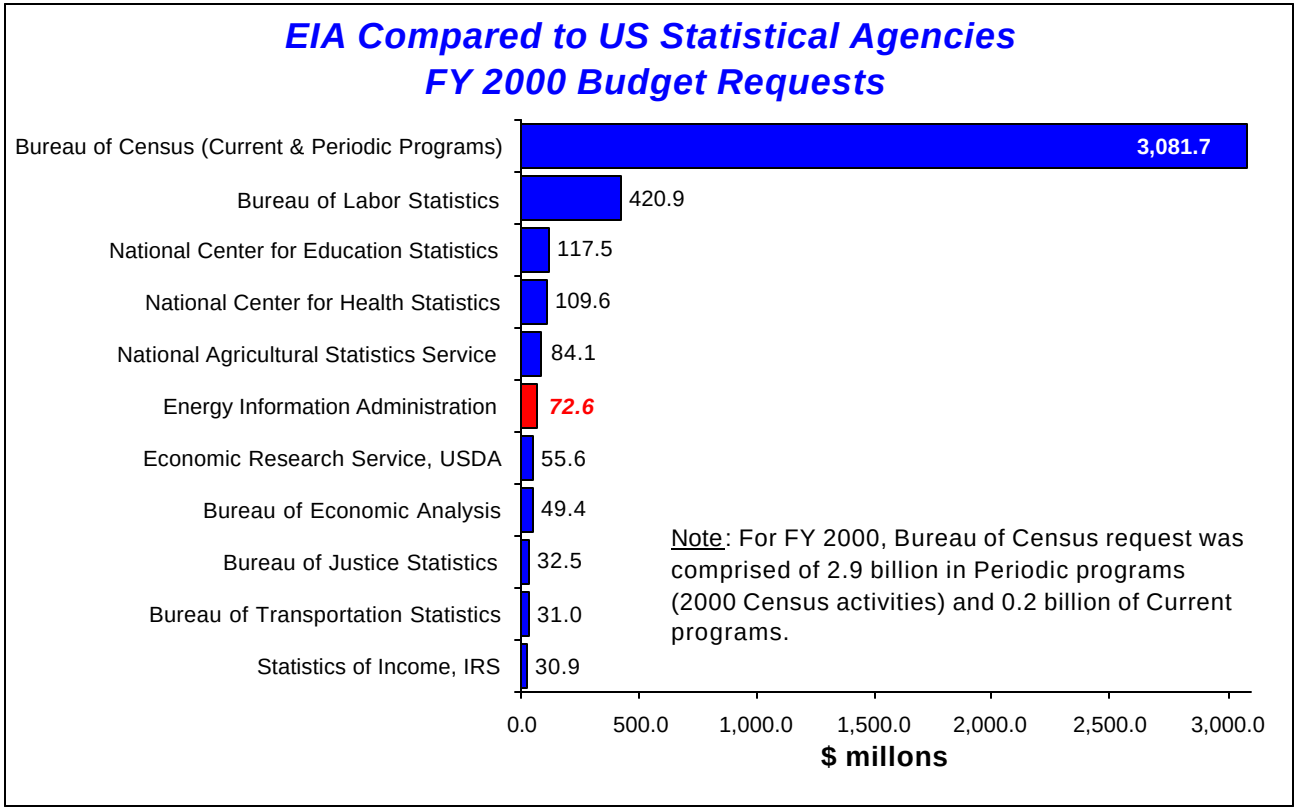

Figure 3

Initiatives

! Continue Overhaul of the Energy Consumption Surveys - Reconstructing a 20-year-old design.

EIA's energy consumption surveys are the Nation's most comprehensive source of data on energy use in major sectors of the United States economy. These surveys also include the characteristics of energy users. EIA presently has surveys in place covering 3 major sectors: households, commercial buildings, and manufacturers. The data from these surveys enlighten public policy debate on energy programs and issues, describe the potential markets for technology and energy efficiency improvements, and contribute to public understanding of energy use and its environmental impacts.

For several reasons, the consumption surveys will become more visible and critical over the next several years. Two principal reasons are: (1) The debate on greenhouse gas emissions and global warming potential will cause the United States, as well as other countries, to assess and understand the impact from major sources of emissions generated by human activity. (2) With the restructuring and deregulation of the electric and natural gas

industries, energy use and price data, especially at the consumers' level, are much more difficult to obtain from suppliers. This type of information will be especially useful to State governments, who are currently working with EIA and increasingly rely on EIA data to understand and effectively manage the current and emerging effects of energy industry restructuring's impact on energy consumers in their State.

In FY 2000, EIA initiated a redesign of the consumption surveys. This redesign initiative is critical because EIA's energy consumption surveys will have operated for more than 20 years based on the same statistical frame design. (Frame design is the complete population from which a statistically representative sample is drawn). This is far beyond the usual 10-year life-cycle tied to the census, but funding was not provided to update the surveys following the 1990 census. (Common statistical practice with complex area samples, especially those employing area-based designs, is to redesign after each decennial census to realign the coverage of the survey in order to reflect the current population demographics.) The sequential updating methodology used over the last 15+ years is a less than optimal method as compared to a decennial redesign in attempting to keep the current consumption surveys as up-to-date as possible. However, the performance and reliability measures of EIA's consumption surveys started to indicate deterioration. For example, commercial building square footage estimates from the 1995 Commercial Building Energy Consumption Survey declined from the level measured by the previous survey (Figure 4), a result at odds with all economic indicators of commercial activity.

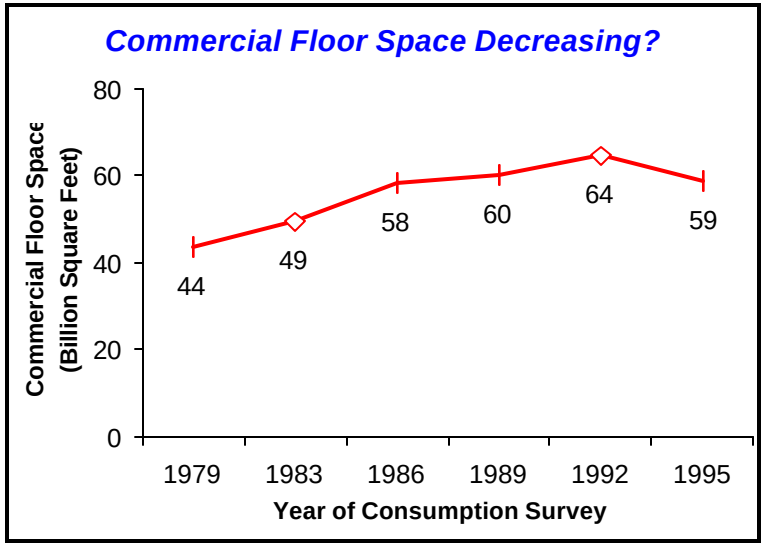

Figure 4

Funds will be used to continue support of Federal and contractor staff engaged in updating the survey frames and sampling. The redesign will realign the consumption surveys' coverage with the distribution of residential and commercial buildings populations as indicated by the 2000 census. Started in FY 2000, this multi-year effort within Energy Markets and End Use is expected to continue through FY 2001 and for three additional years, after which the updated sample design, survey frames, and data systems will be fully implemented. EIA estimates the cost for completing the consumption surveys redesign will be $600 thousand per year.

- Maintain Quality of Energy Consumption Data

Because of the increasing importance of consumer-based data, it is critical to maintain the quality of the data from these surveys. Starting with FY 2001, additional resources are needed to support the operation of these surveys. A permanent addition of $550 thousand in Energy Markets and End Use funding is needed to offset unavoidable increases in survey costs due to (1) the tight labor market for survey field workers; (2) the increasing amount of work needed to keep survey response rates high in the current cultural climate, with respondents increasingly more difficult to reach and more resistant to completing surveys; and (3) the need for expanded and more complex energy consumption and expenditures data collection procedures due to the more complex energy supply structure resulting from the natural gas and electric industry restructuring. Over the past several years, ongoing requirements for EIA to fund annually increasing survey costs from a decreasing budget have eroded EIA's capability to continue operating the three consumption surveys in a way that ensures high-quality data, and have required EIA to conduct these surveys once every four years.

If a permanent increase in EIA's operational base is not provided in FY 2001, EIA will need to choose one or more courses of action:

(1) Eliminate the personal interviews, changing to telephone or mail surveys and/or lengthen the time between surveys to 5 or more years. This course will increase levels of non-response, reduce callback efforts to convert non-respondents, and reduce editing and data cleanup activity. All of these outcomes will degrade the quality and integrity of the energy consumption data.

(2) Discontinue one of the surveys in order to maintain the quality of operations, and the resulting data, for the other two. This results in the loss of information in one of the consumption sectors.

- Continue Overhaul of the Electricity Surveys and Data Systems - Capturing Changes in a Restructured Industry.

In FY 1999, EIA initiated a multi-year effort to overhaul the surveys used to gather information from this nation’s restructuring of electricity generation and distribution. All of the EIA areas associated with electricity data collection, analysis, and reporting are undergoing significant revision and overhaul to reflect this evolving competitive industry. EIA will continue to make use of Federal and contractor staff to complete revision of the forms used to collect data, to develop new survey forms to reflect the unbundling of services, develop and implement new computer systems to process the information, and develop new data disclosure methods to protect the confidentiality of proprietary information. EIA estimates the FY 2001 and next year’s costs for the overhaul of the electricity surveys to be $1.0 million each year. To date EIA is on schedule with this effort, and plans to complete this endeavor in FY 2002 with the full implementation of the overhauled electricity data collection and reporting systems.

! Overhauls of Surveys and Data Systems Are Continuing in Order to Reflect Changes in the Restructured Natural Gas Industry.

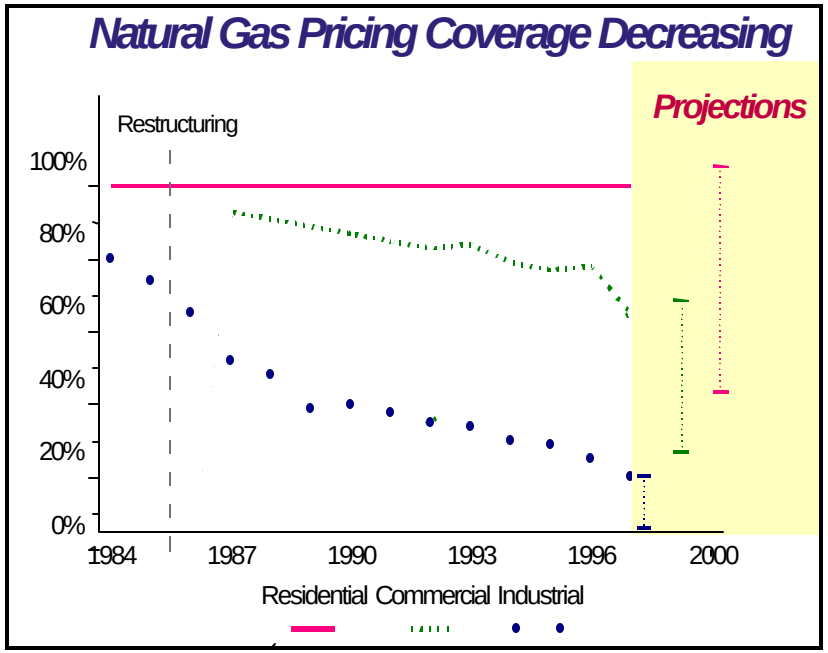

Figure 5

EIA's ability to provide data and information on the natural gas industry has been severely challenged by changes in the regulatory environment and corresponding industry restructuring. In FY 1998 for example, industrial price information for only 15% of the gas used by industrial customers was captured by EIA surveys, down from 75% coverage in FY 1984 (see Figure 5). Furthermore, coverage in the commercial areas dropped from more than 90% in FY 1987 to about 65% in FY 1998. With a move toward more competition at the retail level for residential and small commercial customers, coverage of the prices paid could be substantially reduced from the nearly 100% level of coverage we currently have. In addition, there are major segments of activity relating to prices and volumes for which no information is collected by EIA, such as the cost of underground storage, the cost of transportation, and price and physical transactions at market centers and market hubs.

Restructuring of the electric industry will also effect the information available on prices paid by electric generators for natural gas. Since natural gas is usually the swing fuel in electric generation, information on these prices is essential in understanding the fuel decisions made by electric generator operators and the subsequent impact on electricity prices. With the requested funding, EIA will continue to employ staff and contractors to progress on a three-phase plan to overhaul the natural gas surveys and data systems. The three phases are: (1) collect detailed information on the evolving structure and operation of the natural gas industry identifying critical data needs and sources; (2) develop and field test natural gas surveys and data systems; and (3) implement the overhauled natural gas survey and data systems. This multi-year overhaul of the natural gas data collection and data systems will continue for one more year when the updated systems are fully implemented. For FY 2001, EIA estimates the cost to continue the overhaul of the natural gas surveys and data systems to be $800K.

Starting with FY 2001, EIA is requesting a permanent increase of $175 thousand to provide the funding needed to address natural gas industry frames' (the universe of potential respondents) maintenance. With changes in the natural gas industry, maintaining frames for the existing populations has become increasingly difficult. This difficulty results from the new corporate entities being formed to market natural gas, as well as merger and consolidation activity in the industry. In addition, corporate downsizing and staff turnover has also increased the effort required by EIA to track changes in the industry. EIA Federal and contractor staff resources are not adequate to monitor the changing structure and rapidly changing market participants. To address these deficiencies, EIA needs to institute a higher level of frames' maintenance than was needed when the industry was regulated. With the requested increase, EIA would have the resources needed to: (1) monitor mergers, acquisitions, corporate reorganizations, and the

formation of new companies in the natural gas industry, (2) continually assess the impact of those corporate changes on reporting requirements, and (3) continually assess the impact of these ongoing corporate and industry changes on EIA's operation and processing of monthly and annual surveys.

! Continue Enhancement of International Energy Analysis Capabilities.

The requests for EIA to conduct carbon analysis and produce projections on the international level continue to increase. Currently, EIA's international modeling capability is unable to assess the economic consequences on the United States of energy-related compliance options, commitments, and actions of foreign countries. EIA does not have the policy analysis capabilities, or the capability to represent emissions trading between countries and/or regions. With the requested funding, EIA will continue to engage Federal staff and contractors in the development and/or acquisition of an international modeling capability to assess energy policies, technological change, and international carbon permit trading schemes. Started during FY 1999, the goal of this multi-year project is to acquire an international modeling capability, develop a framework for the modeling of international permit trading schemes using this capability, and ensure consistency with the U.S. projections from the National Energy Modeling System (NEMS). EIA plans to complete this initiative following two additional years of effort, at which time EIA will be in the position to provide reliable analysis and projections on international policies.

In FY 2001, EIA will develop a preliminary version of the model, System for Analysis of Global Energy Markets, based on the project requirements as defined in EIA's Report: "Design and Development Plan for the System for Analysis of Global Energy Markets". Also, in FY 2001, EIA will use this preliminary model to produce the forecasts for the International Energy Outlook 2001. The model methodologies will be enhanced over the next two fiscal years to represent the critical areas of regulation, technological improvement, and international carbon permit trading.

! Confront and Correct Critical Petroleum and Natural Gas Data Quality Issues.

(1) Weekly/Monthly Petroleum Supply Data Quality Control - The accuracy of petroleum supply and demand data is deteriorating. The loss of accuracy is the result of a long, slow deterioration in the quality of the data reported to the EIA that cannot be fully analyzed and corrected with the current level of resources. With the large volume of mergers, acquisitions, joint ventures, and company asset sales, EIA has found it increasingly difficult to track and monitor the changes in the industry while maintaining its petroleum frames (that is, up-to-date lists of potential respondents). EIA will engage Federal and contract staff to increase our efforts to identify the causes of the data quality deterioration, and implement processes to improve and maintain the high data quality needed to provide an accurate understanding of the petroleum industry and petroleum markets. Beginning in FY 2001, EIA estimates this project will take two years to complete.

(2) Petroleum Form Changes to Maintain Relevance - As environmental regulatory changes mandated under the Clean Air Act Amendments of 1990 are entering Tier II, new standards for low sulfur gasoline, national versus regional standards, low sulfur diesel, and other diesel specification changes will be implemented. In addition, environmental concerns over the use of ethers in gasoline, particularly MTBE, are leading to discussions of a ban on this significant gasoline component. These changes will necessitate changes in EIA's survey forms and reporting system as early as 2002. Starting in

FY 2001, the additional funding will support Federal and contractor staff to: (1) conduct analyses on the impact of these regulatory changes, and (2) modify survey reporting forms. Beginning in FY 2001, EIA projects this project will take two-years to complete.

The quality issues cited above are critical to the continuation of EIA's ability to provide accurate and timely petroleum information. If additional funding for these short-term initiatives and ongoing work is not made available, EIA proposes to terminate the operation of two State-level data surveys: the EIA-821, "Annual Fuel Oil and Kerosene Sales Report," and the EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption," and two crude surveys: the EIA-182, "Domestic Crude Oil First Purchase Report," and the EIA-856, "Monthly Foreign Crude Oil Acquisition Report." The resources needed to operate these surveys, would be used to begin addressing the required upgrades in the previously cited oil survey data and information processing systems.

(3) Quality & Timeliness of Natural Gas Production Data - EIA continues to witness a deterioration in the timeliness of responses to natural gas surveys. Although changes underway in survey design and approach should address most of these issues, in the interim, EIA has increasingly relied on imputation and early estimation procedures in order to release these data in a timely manner. The principal impediment to improved timeliness relates to the sources of the information, which relies on State agencies and the Minerals Management Service. These respondents collect information to support their core activities and then must synthesize information to develop abstracts in order to complete the EIA forms. This synthesis is a time-consuming process, which is a key contributing factor to the deterioration in the timely submission of data to EIA. For this task, EIA proposes to engage Federal and contractor staff to develop and implement improved methods of receiving reliable and timely data. Beginning in FY 2001, EIA estimates this project to take two-years to complete at $40 thousand for this year.

(4) Crude Oil Production System Redesign - This EIA information system is over ten-years old and needs to be reprogrammed in order to function within the current information technology base. EIA resources were significantly taxed to cope with poor and late data reporting and radical changes in price and production levels during 1998. This resulted in poorer oil production estimates, and the need for an unusual number of data revisions. Requested funding will be used by Federal and contractor staff to upgrade the system. The upgraded system will have the compatibility to interface with other EIA data systems, and provide the necessary flexibility, timeliness, and quality assurance to support the monthly and annual dissemination of oil production data at the State level. Beginning in FY 2001, EIA estimates the cost of this one-year project at $50 thousand.

(5) Update/Rewrite Oil and Gas Integrated Field File (OGIFF) System - EIA's OGIFF database is the premier U.S. tool for analyzing proved oil and gas reserves and ultimate recovery appreciation. The current system is over 10-years-old and is written in a data base language no longer supported. It is not cost effective to update the current system as the expertise is no longer available for this unsupported data base language. With the requested funding, EIA will engage Federal staff and contractors to rewrite the OGIFF system for operation on a contemporary SQL database. Starting in FY 2001, EIA estimates the cost of this one-year project at $130 thousand.

- Continued Development of Common Collection and Processing System (CCAPS) - Integrate Energy Surveys and Incorporating Data Collection.

EIA's is continuing the development and integration CCAPS survey data collection and processing. The goal is to significantly reduce data collection and processing costs, reduce software life-cycle costs, and to continually add value by improving the timeliness of energy information provided for EIA respondents and customers. To date, several coal and natural gas surveys have been transitioned into CCAPS. EIA plans to place these surveys in operation during the year 2000 survey cycle. During FY 2000, EIA will begin to transition the petroleum supply surveys. During FY 2001, EIA plans to complete the integration of the petroleum supply surveys into CCAPS, and begin work on the remaining EIA energy surveys' transition into the CCAPS data processing structure. In addition, EIA plans to start incorporating data collection into the CCAPS framework to enhance the efficient flow of energy data collection to processing. CCAPS will incorporate a variety of collection methods including Internet, mailed software (the successor to EIA's PEDRO), and mailed paper forms.

During FY 2001, EIA plans to start work on integrating a common data querying and extraction capability within CCAPS. With this capability, CCAPS will be able to calculate all the aggregates within and across surveys. CCAPS will also provide a flexible tool for developing drafts of modified or new tables being considered for dissemination. Once the development of CCAPS for survey data processing is complete, and in keeping with our Strategic Plan, it is EIA's plan to integrate an On-Line Analytical Processing (OLAP) capability to provide users easy access to the data. Initially, an OLAP system will be developed for EIA's Local Area Network (LAN) users, with the long-term goal of providing this capability to the public via the Internet. EIA estimates the cost in FY 2001 to pursue these CCAPS initiatives to be $500 thousand.

Efficiency Investments

EIA will continue to improve its base programs through investing in methods and integrating technologies that achieve efficiency gains. Over the past several years, EIA has invested in new, streamlined data systems, increased use of personal computers, enhanced local area networks, and upgraded servers and enterprise servers, to access, process, and disseminate information. EIA plans to continue these endeavors, with an increasing number of EIA products being disseminated only in electronic form. Other cost savings will occur through eliminating redundant practices, by continuously aligning our workforce of Federal and contractor staff to efficiently and effectively address EIA's evolving requirements. In addition, EIA will continue analyzing processes with the purpose of streamlining operations, reducing time requirements, retiring or replacing systems which are inefficient or no longer required, and consolidating program functions where efficiencies can be attained.

EIA Omnibus Procurement

With the purpose of improving EIA's contractor cost efficiency, the EIA Omnibus Procurement (EOP) was awarded in mid-December 1997. This action represents a fundamental change in the way EIA awards tasks. Prior to this initiative, EIA employed several contractors who were individually selected following a long competitive process. Tasks awarded to these contractors were on a cost-plus-fixed-fee basis. With a cost-plus-fixed-fee task, the actual cost of each task is not known until the work was completed, so the final costs of some cost-plus-fixed-fee tasks are higher than

expected. With the ability provided within the EOP to issue firm-fixed price tasks, EIA knows what a task will cost with far less potential for unexpected or unanticipated cost increases at the conclusion of the task.

The EOP award also supports EIA's Business Reengineering goals which promote continuous efficiency improvements. In addition, the EOP award supports the goals stated in the Federal Acquisition Streamlining Act (FASA) which promotes simplification of procurement and increased use of competition at the task level through the use of multi-award contracts. To pursue this contract efficiency initiative, EIA established a Procurement Planning Advisory Group. This group collaborated with the Department, the Office of Management and Budget, and the Small Business Administration, to investigate alternatives to improve EIA's task award cost effectiveness. The group's efforts resulted in the EOP.

The EOP is a multi-award contract with three functional areas: Information Management and Product Production, Energy Analysis and Forecasting, and Information Technology. With the EOP, small, 8(a), and small disadvantaged businesses having significant opportunities to contend for all competed task orders within their functional area. EIA started awarding task orders under the EOP in May 1998, with a goal of 10% being firm-fixed price task orders. For FY 1999, of the 143-task orders were awarded, 53% of the task orders are firm-fixed price.

With the EOP and competition at the task level, EIA is maximizing the opportunity to receive the best value for every tax dollar used to engage contractor support. In addition, the previous method of competing every individual contact was replaced with a more cost effective multi-award contract competition. As a forerunner in the Department of Energy headquarters in implementing a multi-award contract, EIA has lead the way for other parts of the Department considering this type of contracting to improve the efficiency and effective use of their contractor support.

STAFFING

In the Department of Energy's Workforce 21 Initiative, EIA's FY 2001 end-of-year Federal staffing level is 375 FTEs. EIA plans to rely on normal attrition and prioritized hiring to maintain Federal staffing level. With the revised Federal staff targets, and through the initiation of a staff replacement program, EIA will be able to address our projected deficits in industry expertise and leadership demographics.

For FY 2001, EIA's salary and benefit costs are estimated to be $35.130 million, or 47% of EIA's $75.0 million request. This estimate assumes an FY 2001 FTE level of 375, no reduction-in-force, OMB personnel cost projections, and a normal attrition rate.

EIA plans to continue the development of Federal staff capabilities to address EIA's future critical needs, and make economical and effective use of contractor support where appropriate. At requested resource levels, EIA estimates a reduction in use of contract support from a FY 1995 ratio of 1.0 Federal personnel to 1.2 contractor staff, to a 1.0 Federal personnel to 0.62 contractor staff. That is about a 50% reduction.

In conjunction with EIA's strategic planning process and workforce management endeavors, EIA will continually examine its staff skill mix and plans to assure future employee development and training needs are addressed. EIA will continue to accomplish its mission by continuously reassessing and realigning its portfolio of products and services, with an increasing reliance on Federal staffing, and the integration of evolving information management and communications technologies.

LINK TO DEPARTMENT STRATEGIC PLAN

As part of the Energy Resources Strategic Goal, DOE committed to "carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives." EIA is responsible for two action items to support this Departmental objective: (1) increasing the number of unique monthly users of EIA's Web Site, and (2) the dissemination of EIA's midterm forecasts as contained in the *Annual Energy Outlook*. Significant growth in the usage of EIA's Web Site is discussed in the section "Increasing Customer Usage." In FY 2001, EIA is planning to continue publishing the *Annual Energy Outlook*. These items are reflected in the DOE FY 2001 Annual Performance Plan as Item ER5-1.

PERFORMANCE RESULTS

EIA's major output is energy information. The purpose (outcome) of EIA's energy data collection, analysis and dissemination endeavors is to promote sound policymaking, efficient markets and public understanding. Because assessing the level of achievement of these ultimate outcomes is very difficult and costly, we approximate overall achievement of our mission by measuring customer satisfaction levels and product usage. EIA tracks product usage levels in many ways (number of Web site files downloads, number of publications mailed out, number of customers and the products they use, number of telephone inquiries, and number of media citations, etc.). EIA measures customer satisfaction through surveys and focus groups. Both customer satisfaction ratings and usage levels are significant. The results also show that while EIA is accomplishing our mission, has made improvements, and has a growing list of

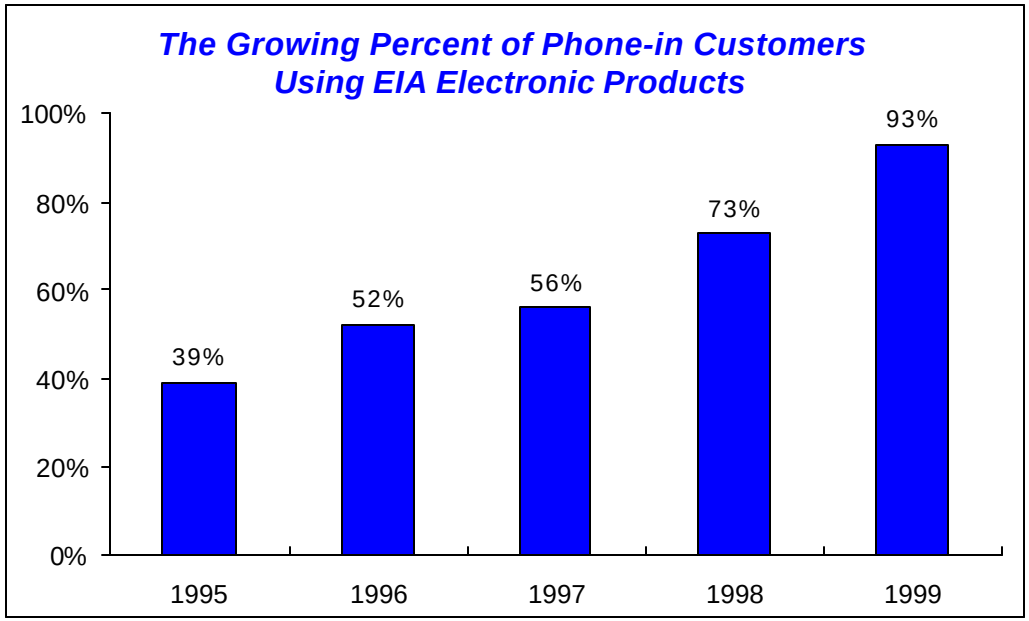

Figure 6

satisfied customers, there are still areas which can benefit from improvement. EIA's financial and market results indicated that in spite of overall reductions in both funding and staffing between FY 1995 and FY 1999, EIA has expanded our customer base and improved our products' attributes. Through large-scale electronic and media dissemination of our products, EIA has improved the availability of energy information while reducing printing and distribution costs. EIA will continue to focus on achieving higher levels of efficiency and effectiveness.

Customer Satisfaction and Survey Activities

EIA has conducted an annual survey of its telephone customers each year since FY 1995, establishing a continuing time series of performance results. EIA has also conducted surveys of users of its Web site, CD-ROM, and other energy data dissemination methods, and more than 2,000 recipients of EIA printed publications. In all of these surveys, customers are asked to rate their overall satisfaction, and rate EIA on five attributes of customer service (courtesy, promptness, accessibility, knowledge of the material, and ability to understand customer needs) and on five attributes of product quality (availability, relevance, accuracy, comprehensiveness, and timeliness).

In each year since FY 1995, at least 95% of EIA's telephone customers reported they were either satisfied or very satisfied with EIA's overall customer service. In addition, the number of customers using EIA electronic products has increased drastically (see Figure 6).

In terms of the EIA products' quality, telephone customer satisfaction ratings overall are also high (86% to 94%) over the past five years. Furthermore, a one-time question in 1997 was added (at the request of DOE's Office of Quality Management) which showed that 87% of telephone customers trusted EIA to provide a quality product to a "great extent" or "completely." However, among the five quality attributes, timeliness has historically had lower satisfaction scores. EIA has specifically targeted timeliness (which includes decreasing the time between when data are collected and when they are ready for dissemination, and increasing the speed of dissemination) as a key area of improvement. A new Web site customer survey to be fielded early in FY 2000 will follow-up with our customers on product timeliness improvement.

EIA collects energy data from respondents who are required to fill out survey forms. The more intuitive and understandable the forms, the higher quality the data. In 1998, EIA initiated three projects to redesign specific survey forms, one using focus groups and two using a technique called cognitive interviewing. This process involves respondents completing a survey with an interviewer while "thinking out loud," so the interviewer can see how they interact with the questionnaire and what meanings they get from terms and instructions. (Prior to 1998, EIA relied heavily on post-collection techniques, such as error checks and periodic expert reviews.) In June 1998, EIA used cognitive interviewing to test a redesign of the Manufacturing Energy Consumption Survey, prior to the 1999 data collection cycle. The revised version is longer but has a more intuitive design, and instructions printed throughout the survey directly in places where respondents need to read them (rather than in a separate booklet). In redesigning this survey, EIA conducted cognitive interviews at seven local manufacturing establishments, then revised the survey and pretested it. Respondents, who agreed to serve as pretest subjects, reported the revisions improved the survey design, the new format was easier to follow, and the additional length of the survey was not a concern.

EIA staff was trained in conducting cognitive interviews so these techniques can be used on other EIA data collections. In the near term, EIA plans to employ cognitive interviewing as a part of the information collection redesign efforts in the natural gas area. Building on these successes, EIA plans to make use of focus groups and cognitive interviewing as key processes in revamping energy surveys.

Increasing Customer Usage

EIA has engaged in an aggressive program to expand the availability of electronic information, upgrade energy data dissemination, and enhance coverage of energy information issues in the news media. This increased use of electronic technology (Internet, CD-ROM, etc.) for energy data dissemination has led to an explosive growth in the number of customers for our data, as well as increased the breadth of information distributed. For example, the growth in monthly users of EIA Web site is remarkable (see Figure 7 - note numbers of monthly users do not include EIA employees accessing the site). Rapid growth like that seen in the use of EIA's Web site access is evidenced in Web site file access. Of note, during 1997, EIA set a goal to increase the average number of unique monthly users of its web site by 20% annually, from a baseline of 37,000 users sessions. Between

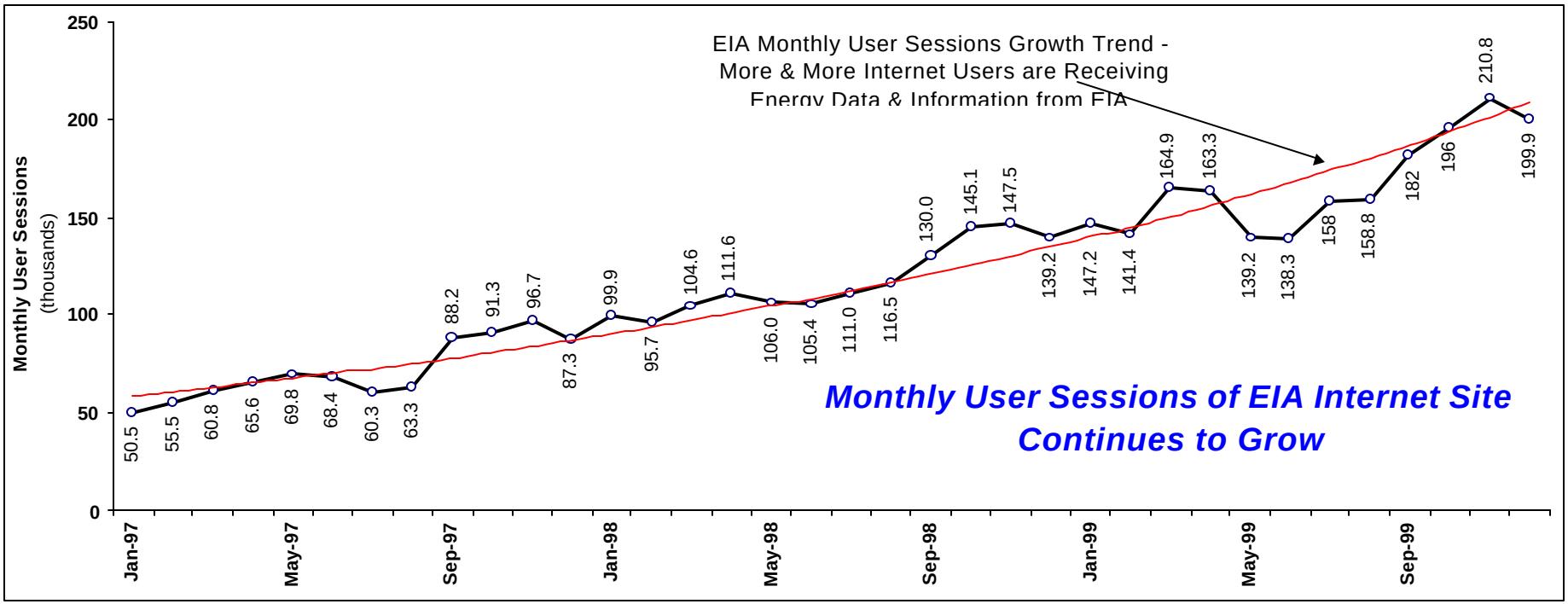

Figure 7

1996 to 1997 the growth in usage was 180%. By the end of 1997, EIA exceeded the goal with an average of 71,500 user sessions. By the end of 1998, EIA averaged 87,000 user sessions, again exceeding the goal. For 1999, EIA averaged 163,600 monthly user sessions, an increase of more than 64.7% when compared to the 1998 average monthly usage level. For December 1999 EIA was witnessing about 200,000 user sessions. For 1999, information downloaded from the EIA Web site averaged 94 gigabytes per month, or about 1.13 terabytes of energy information for the year. For December 1999, 1.4 million files were downloaded. This represents a 76% increase when compared to December 1998.

One result of the increase in the electronic availability of our information has been a dramatic increase in the number of customers contacting the National Energy Information Center for on-line support. For example, e-mail traffic is up nearly 114% between 1998 and 1999. Another result of our expanded use of electronic dissemination is a 35% reduction in the number of paper publications and a 50% reduction in publication printing costs since 1994, which results in avoiding more than $500,000 in expenditures per year.

EIA has dramatically increased the distribution of its information by becoming the dependable source of objective energy information for the news media. This has enabled our energy data to be widely use by the general public with minimal cost to the agency (Figure 8). In addition to the steady growth in media use of EIA information, public concern about price volatility in the gasoline and heating oil markets led to the increases in media citations in the spring of 1996, the winter of 1997, and the fall and winter of 1998-1999.

Another example of outcomes and impact, is the number of copies of EIA's recent brochure "Why Do Natural Gas Prices Fluctuate So Much?" being requested by natural gas companies for distribution to their customers. These natural gas companies see this brochure as an excellent way to explain to their customers why natural gas prices fluctuate. In addition, natural gas companies can note that this information was prepared by a non-biased source.

Perhaps the area most difficult to quantify is the impact of EIA's data on the policy development process. EIA has substantial evidence that our information and analyses are sought prior to legislative action. Most recently, as the restructuring of the electric power industry has moved to the front of the energy debate, EIA's briefing on how the industry works have been presented to more than 50 Congressional staff, principally from the Senate Energy and Natural Resources Committee. EIA's Administrator was requested to testify before the Energy and Power Subcommittee of the House of Representatives on future competitive electricity prices. EIA's brochure "The Restructuring of the Electric Power Industry - A Capsule of Issues and Events" which clarifies the complex issues involved, is one of the most popular files on our Web site with more than 2,000 printed copies distributed. EIA was requested by the Chairman and ranking minority member of the House Science Committee to prepare a study on the cost and economic impacts of proposed reductions in greenhouse gas emissions, in accordance with the Kyoto agreement. EIA believes the inclusion of our policy-neutral input on these major issues will help result in informed debate and sound policy decisions.

Of special note, EIA's Web site has won several awards for quality and content. Most recently, EIA's Web site was selected by *Government Executive* magazine as one of the best sixteen Federal Web sites for 1999, from 120 nominated web sites. In the announcement of the winners, *Government Executive* stated, "EIA is a tiny agency, so the comprehensiveness of its site - and its ease of navigation - amazed the judges. Everyone

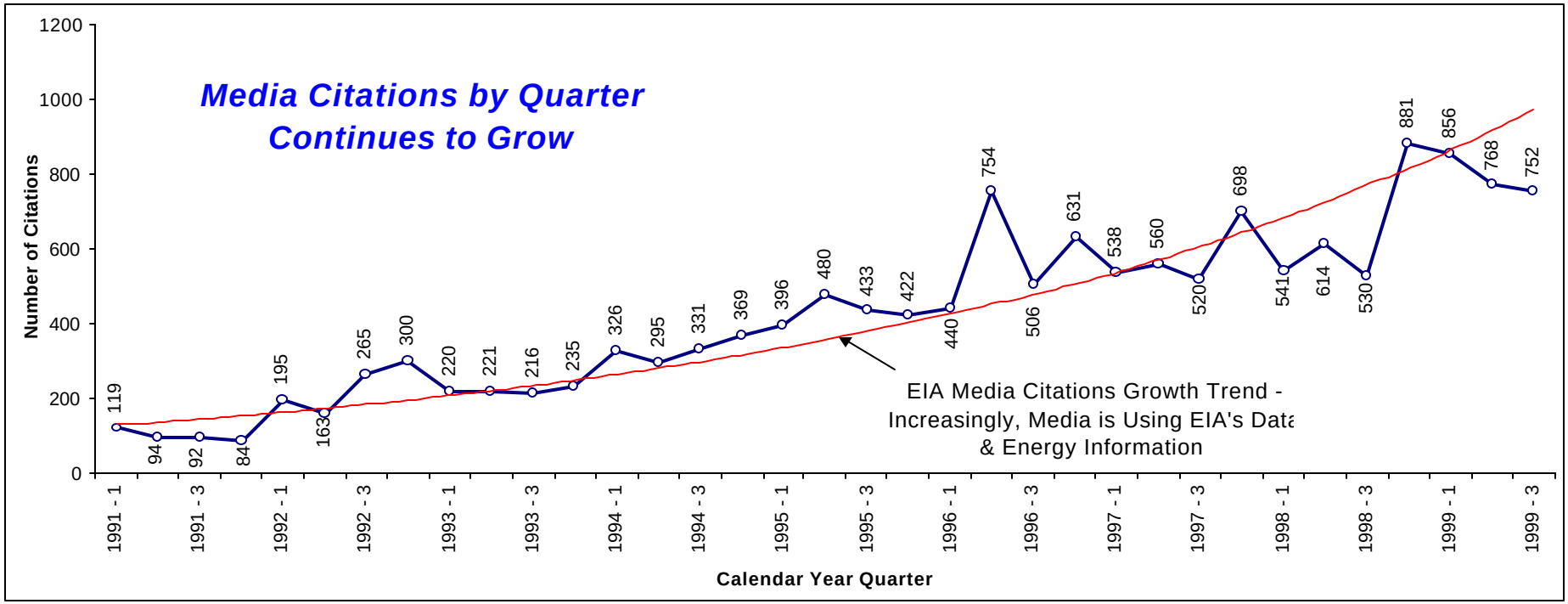

Figure 9

who works in the energy industry is well-served by this site." EIA also was commended for making full use of the power of e-mail by featuring e-mail notification lists for more than 30 different energy subjects.

In summary, EIA is serving a growing customer base, and achieving high levels of customer satisfaction with our energy data, analyses, forecasts, and timeliness. During FY 2001, EIA expects to receive 3 million inquires for energy information. To meet future customer requirements, EIA will need to leverage evolving information processing and communications technologies, explore and develop innovations to improve our capabilities, and align our resources to effectively meet the energy information needs of Government, industry, and the public.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(dollars in thousands)
PROGRAM FUNDING PROFILE
National Energy Information System

Activity	FY 1999 Enacted	FY 2000 Enacted [1]	FY 2001 Base	FY 2001 Request	Program Change Request vs. Base Dollar	Program Change Request vs. Base Percent
Oil and Gas						
Operating Expenses	$ 17,555	$ 18,197	$ 18,197	$ 19,249	$ 1,052	5.8%
Coal, Nuclear, Electric, and Alternate Fuels						
Operating Expenses	$ 9,979	$ 10,810	$ 10,810	$ 10,600	$ -210	-1.9%
Energy Markets and End Use						
Operating Expenses	$ 9,067	$ 9,845	$ 9,845	$ 10,355	$ 510	5.2%
Integrated Analysis and Forecasting						
Operating Expenses	$ 8,366	$ 9,112	$ 9,112	$ 9,122	$ 10	0.1%
Information Technology						
Operating Expenses	$ 9,795	$ 9,014	$ 9,014	$ 9,629	$ 615	6.8%
National Energy Information Center						
Operating Expenses	$ 2,199	$ 2,213	$ 2,213	$ 2,314	$ 101	4.6%
Statistics and Methods						
Operating Expenses	$ 2,255	$ 2,399	$ 2,399	$ 2,408	$ 9	0.4%
Resource Management						
Operating Expenses	$ 11,284	$ 10,778	$ 10,778	$ 11,323	$ 545	5.1%
SUBTOTAL	$ 70,500	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%
Use of Prior Year Balances [2]	- 315	- -	- -	- -	- -	- -
TOTAL	$ 70,185	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION

Proposed Appropriation Language

For necessary expenses in carrying out the activities of the Energy Information Administration, [$72,644,000] *$75,000,000*, to remain available until expended.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(Tabular dollars in thousands, Narrative in whole dollars)

PROGRAM MISSION

On line and off the shelf, the Energy Information Administration (EIA) is the first place to go for the last word in energy information. The EIA is a leader in providing high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding. As part of EIA's strategic plan, the following goals have been set:

- Assure products and services are relevant to the needs of customers
- Assure data, analyses, and forecasts are of the highest quality
- Provide customers fast and easy access to public energy information
- As a performance driven organization, conduct business in an efficient and cost-effective manner
- Work together to achieve the full potential of a diverse workforce

As an independent statistical/analytical agency, EIA has two principal roles. First, EIA's primary responsibility is to conduct the functions required by statute. These functions include the development and maintenance of a comprehensive energy database, and the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors. EIA also prepares specific reports which are required by law. Second, EIA responds to inquiries for energy information. The primary customers of EIA services are public policymakers in the Department of Energy and the Congress. Customers include other agencies in the Executive branch and independent agencies of the Federal Government, State and local governments, the energy industry, educational institutions, the news media, and the public. To preserve credibility with this broad client base, EIA maintains its independence from policy development. Consequently, EIA's role is to provide data and perform analyses. EIA does not develop or take policy positions. EIA has analyzed, and will continue to analyze, policy proposals generated elsewhere. EIA's strategy is to make its broad mix of products and services available to its customers through the continued use of publications, and an expansion of electronic dissemination via the EIA web site and CD-ROM.

REQUEST

EIA's FY 2001 Congressional budget request is $75.0 million. This request is $2.4 million over our FY 2000 appropriation of $72.6 million and 11.4% below the FY 1995 appropriation of $84.6 million (or 18.8% below after adjusting for inflation). As can be seen in Figure 1, EIA's budget has undergone a dramatic decrease over the past two decades, resulting in a reduction of 57.5% (adjusted for inflation) since FY 1980. In FY 2001, EIA intends to continue our base program, enhance international analysis capabilities, begin work associated with assessing the accuracy and reliability of several energy data systems, continuing overhauling several survey frames and data systems, and seek further efficiency gains through the use of information processing and communications technologies.

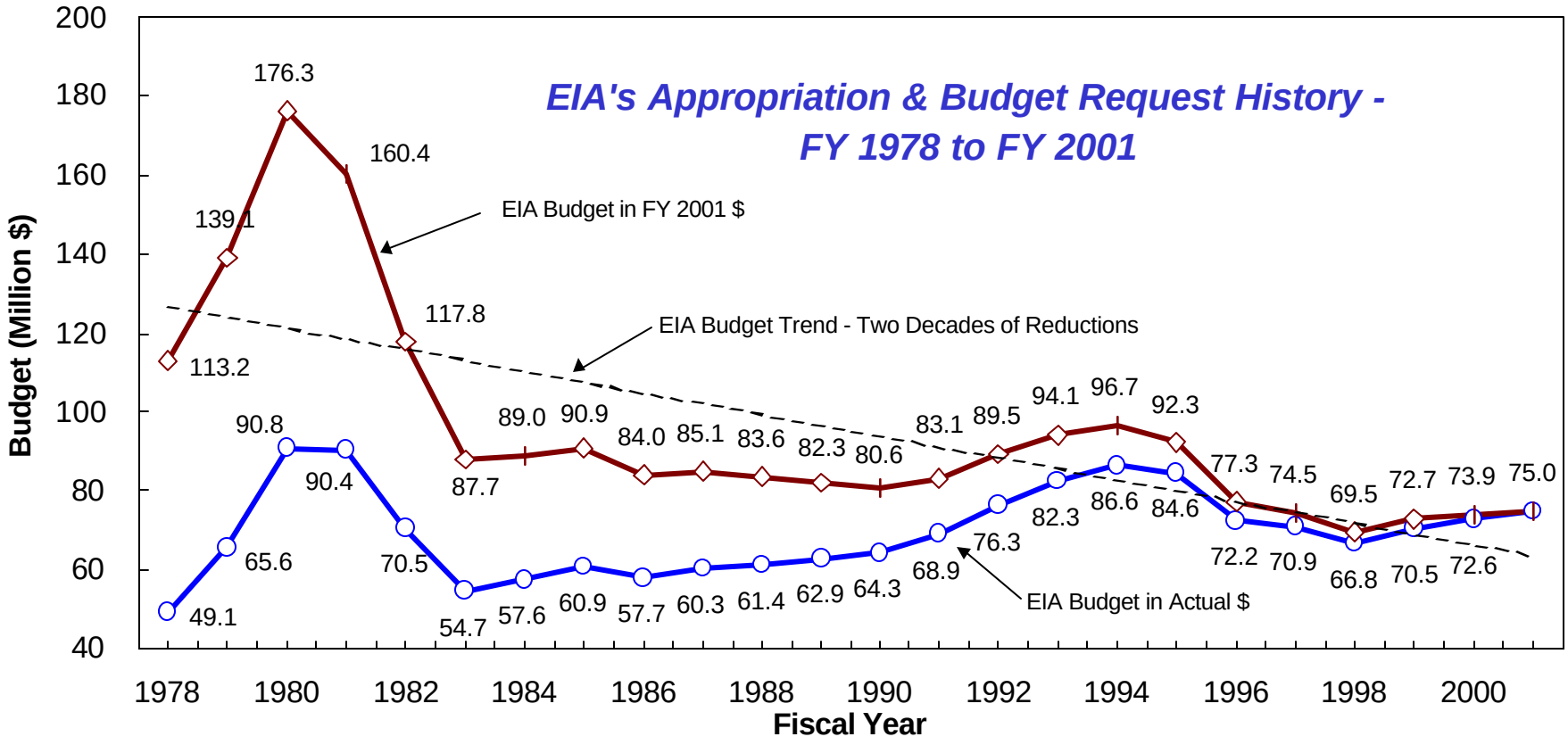

Figure 1

EIA continues to stand alone as the only statistical agency to absorb significant budget reductions since FY 1994 (see Figure 2). As one of the Federal Statistical Agencies, EIA has one of the smallest annual budgets, accounting for only 1.8% of the total FY 2000 U.S. statistical agencies budget requests (see Figure 3).

EIA has also absorbed significant Federal staff reductions. The work formerly done by these employees was not shifted to contractors, as EIA absorbed even greater reductions in contractor staff levels. Since 1995, EIA's total workforce, including both Federal and contractor employees, has decreased from approximately 1000 personnel to approximately 674 personnel in 1999, a 33% reduction.

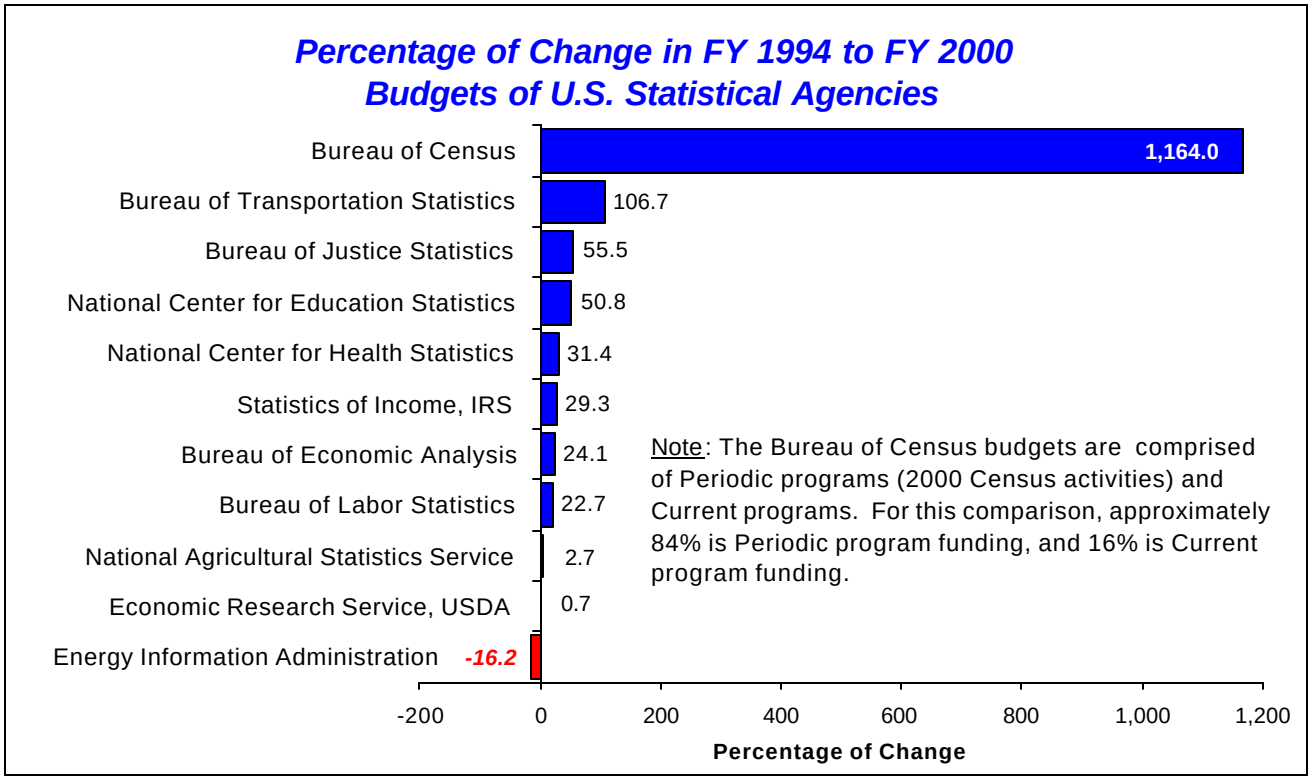

Figure 2

Base Program

In FY 2001, EIA's base program will consist of the maintenance of a comprehensive energy database, the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors, the maintenance of the National Energy Modeling System for midterm energy markets analysis and forecasting, the maintenance of the Short-Term Integrated Forecasting System for near-term energy market analysis and forecasting, customer forums and surveys to maintain an up-to-date product and service mix, and the continued expansion of electronic information dissemination via the EIA Web site and CD-ROM.

Program Investments

For FY 2001, EIA will continue to focus on: (1) The overhaul of EIA consumption surveys to update these 20-year-old surveys, (2) The overhaul of the natural gas and electricity surveys and data systems to recognize and accommodate the changes in the natural gas and electricity industries brought on by deregulation and restructuring. (3) Enhancement of EIA's international analysis capabilities in order to assess carbon mitigation, permit trading, and other global climate change issues. (4) Reversing the deterioration in data quality and accuracy in several energy areas.

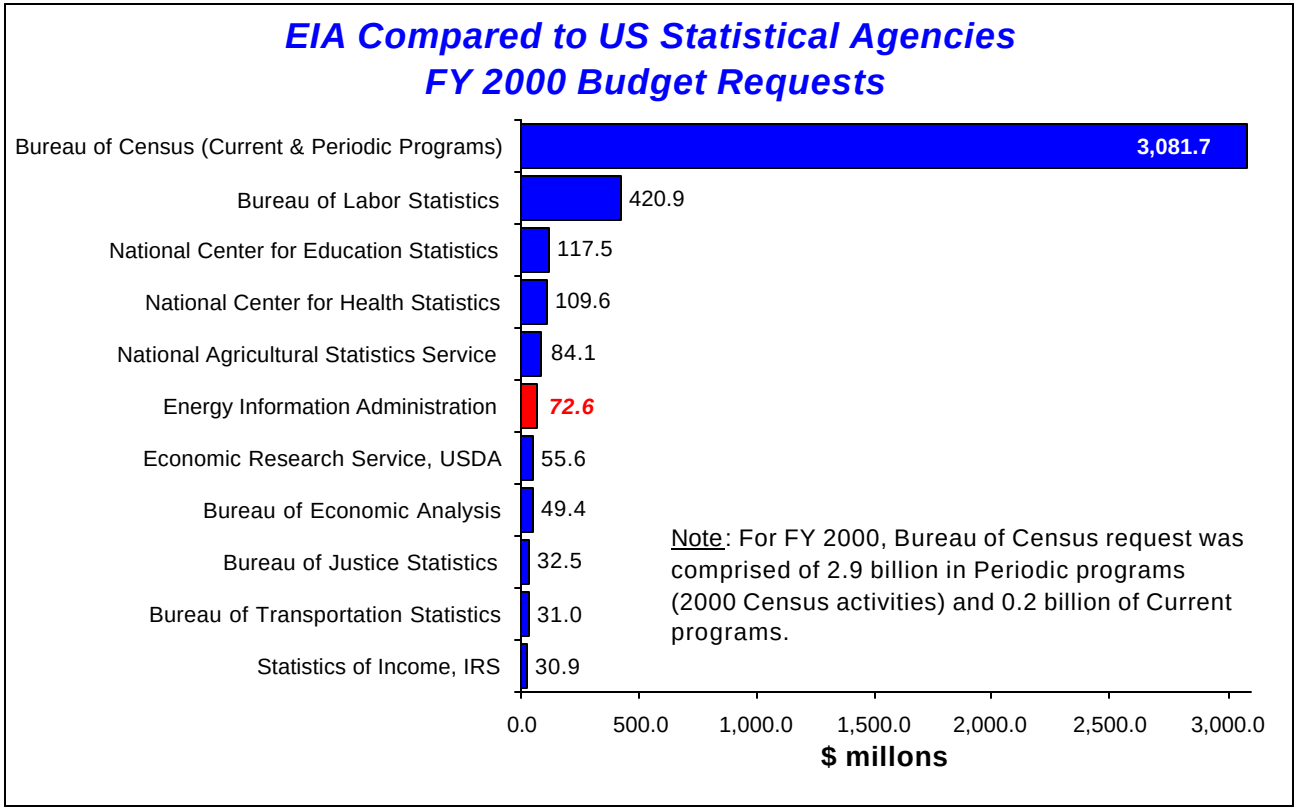

Figure 3

Initiatives

! Continue Overhaul of the Energy Consumption Surveys - Reconstructing a 20-year-old design.

EIA's energy consumption surveys are the Nation's most comprehensive source of data on energy use in major sectors of the United States economy. These surveys also include the characteristics of energy users. EIA presently has surveys in place covering 3 major sectors: households, commercial buildings, and manufacturers. The data from these surveys enlighten public policy debate on energy programs and issues, describe the potential markets for technology and energy efficiency improvements, and contribute to public understanding of energy use and its environmental impacts.

For several reasons, the consumption surveys will become more visible and critical over the next several years. Two principal reasons are: (1) The debate on greenhouse gas emissions and global warming potential will cause the United States, as well as other countries, to assess and understand the impact from major sources of emissions generated by human activity. (2) With the restructuring and deregulation of the electric and natural gas

industries, energy use and price data, especially at the consumers' level, are much more difficult to obtain from suppliers. This type of information will be especially useful to State governments, who are currently working with EIA and increasingly rely on EIA data to understand and effectively manage the current and emerging effects of energy industry restructuring's impact on energy consumers in their State.

In FY 2000, EIA initiated a redesign of the consumption surveys. This redesign initiative is critical because EIA's energy consumption surveys will have operated for more than 20 years based on the same statistical frame design. (Frame design is the complete population from which a statistically representative sample is drawn). This is far beyond the usual 10-year life-cycle tied to the census, but funding was not provided to update the surveys following the 1990 census. (Common statistical practice with complex area samples, especially those employing area-based designs, is to redesign after each decennial census to realign the coverage of the survey in order to reflect the current population demographics.) The sequential updating methodology used over the last 15+ years is a less than optimal method as compared to a decennial redesign in attempting to keep the current consumption surveys as up-to-date as possible. However, the performance and reliability measures of EIA's consumption surveys started to indicate deterioration. For example, commercial building square footage estimates from the 1995 Commercial Building Energy Consumption Survey declined from the level measured by the previous survey (Figure 4), a result at odds with all economic indicators of commercial activity.

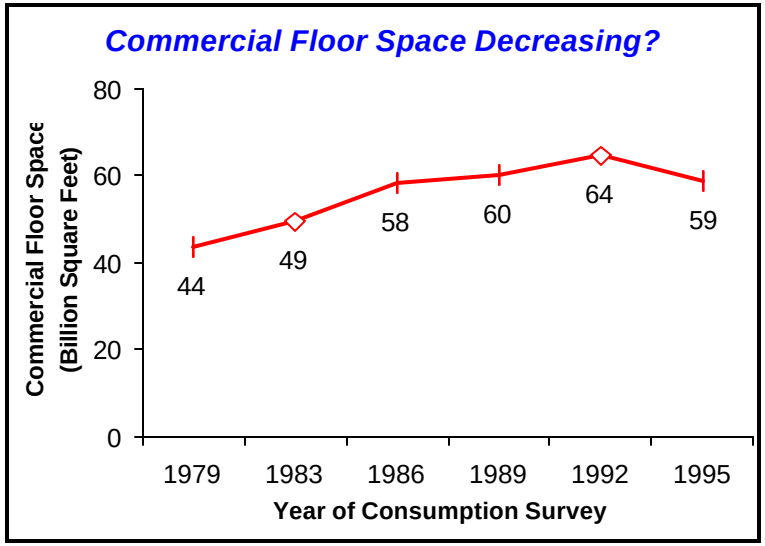

Figure 4

Funds will be used to continue support of Federal and contractor staff engaged in updating the survey frames and sampling. The redesign will realign the consumption surveys' coverage with the distribution of residential and commercial buildings populations as indicated by the 2000 census. Started in FY 2000, this multi-year effort within Energy Markets and End Use is expected to continue through FY 2001 and for three additional years, after which the updated sample design, survey frames, and data systems will be fully implemented. EIA estimates the cost for completing the consumption surveys redesign will be $600 thousand per year.

- Maintain Quality of Energy Consumption Data

Because of the increasing importance of consumer-based data, it is critical to maintain the quality of the data from these surveys. Starting with FY 2001, additional resources are needed to support the operation of these surveys. A permanent addition of $550 thousand in Energy Markets and End Use funding is needed to offset unavoidable increases in survey costs due to (1) the tight labor market for survey field workers; (2) the increasing amount of work needed to keep survey response rates high in the current cultural climate, with respondents increasingly more difficult to reach and more resistant to completing surveys; and (3) the need for expanded and more complex energy consumption and expenditures data collection procedures due to the more complex energy supply structure resulting from the natural gas and electric industry restructuring. Over the past several years, ongoing requirements for EIA to fund annually increasing survey costs from a decreasing budget have eroded EIA's capability to continue operating the three consumption surveys in a way that ensures high-quality data, and have required EIA to conduct these surveys once every four years.

If a permanent increase in EIA's operational base is not provided in FY 2001, EIA will need to choose one or more courses of action:

(1) Eliminate the personal interviews, changing to telephone or mail surveys and/or lengthen the time between surveys to 5 or more years. This course will increase levels of non-response, reduce callback efforts to convert non-respondents, and reduce editing and data cleanup activity. All of these outcomes will degrade the quality and integrity of the energy consumption data.

(2) Discontinue one of the surveys in order to maintain the quality of operations, and the resulting data, for the other two. This results in the loss of information in one of the consumption sectors.

- Continue Overhaul of the Electricity Surveys and Data Systems - Capturing Changes in a Restructured Industry.

In FY 1999, EIA initiated a multi-year effort to overhaul the surveys used to gather information from this nation’s restructuring of electricity generation and distribution. All of the EIA areas associated with electricity data collection, analysis, and reporting are undergoing significant revision and overhaul to reflect this evolving competitive industry. EIA will continue to make use of Federal and contractor staff to complete revision of the forms used to collect data, to develop new survey forms to reflect the unbundling of services, develop and implement new computer systems to process the information, and develop new data disclosure methods to protect the confidentiality of proprietary information. EIA estimates the FY 2001 and next year’s costs for the overhaul of the electricity surveys to be $1.0 million each year. To date EIA is on schedule with this effort, and plans to complete this endeavor in FY 2002 with the full implementation of the overhauled electricity data collection and reporting systems.

! Overhauls of Surveys and Data Systems Are Continuing in Order to Reflect Changes in the Restructured Natural Gas Industry.

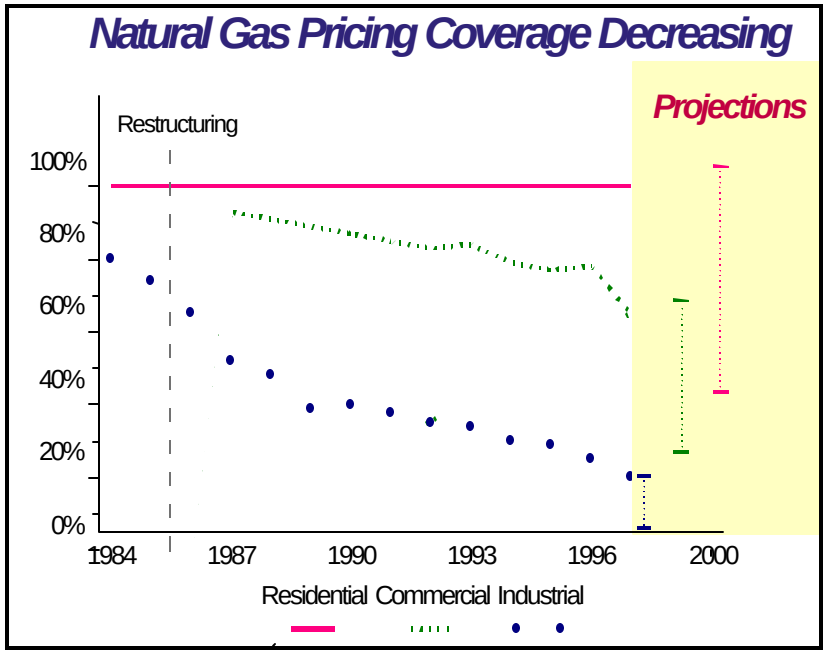

Figure 5

EIA's ability to provide data and information on the natural gas industry has been severely challenged by changes in the regulatory environment and corresponding industry restructuring. In FY 1998 for example, industrial price information for only 15% of the gas used by industrial customers was captured by EIA surveys, down from 75% coverage in FY 1984 (see Figure 5). Furthermore, coverage in the commercial areas dropped from more than 90% in FY 1987 to about 65% in FY 1998. With a move toward more competition at the retail level for residential and small commercial customers, coverage of the prices paid could be substantially reduced from the nearly 100% level of coverage we currently have. In addition, there are major segments of activity relating to prices and volumes for which no information is collected by EIA, such as the cost of underground storage, the cost of transportation, and price and physical transactions at market centers and market hubs.

Restructuring of the electric industry will also effect the information available on prices paid by electric generators for natural gas. Since natural gas is usually the swing fuel in electric generation, information on these prices is essential in understanding the fuel decisions made by electric generator operators and the subsequent impact on electricity prices. With the requested funding, EIA will continue to employ staff and contractors to progress on a three-phase plan to overhaul the natural gas surveys and data systems. The three phases are: (1) collect detailed information on the evolving structure and operation of the natural gas industry identifying critical data needs and sources; (2) develop and field test natural gas surveys and data systems; and (3) implement the overhauled natural gas survey and data systems. This multi-year overhaul of the natural gas data collection and data systems will continue for one more year when the updated systems are fully implemented. For FY 2001, EIA estimates the cost to continue the overhaul of the natural gas surveys and data systems to be $800K.

Starting with FY 2001, EIA is requesting a permanent increase of $175 thousand to provide the funding needed to address natural gas industry frames' (the universe of potential respondents) maintenance. With changes in the natural gas industry, maintaining frames for the existing populations has become increasingly difficult. This difficulty results from the new corporate entities being formed to market natural gas, as well as merger and consolidation activity in the industry. In addition, corporate downsizing and staff turnover has also increased the effort required by EIA to track changes in the industry. EIA Federal and contractor staff resources are not adequate to monitor the changing structure and rapidly changing market participants. To address these deficiencies, EIA needs to institute a higher level of frames' maintenance than was needed when the industry was regulated. With the requested increase, EIA would have the resources needed to: (1) monitor mergers, acquisitions, corporate reorganizations, and the

formation of new companies in the natural gas industry, (2) continually assess the impact of those corporate changes on reporting requirements, and (3) continually assess the impact of these ongoing corporate and industry changes on EIA's operation and processing of monthly and annual surveys.

! Continue Enhancement of International Energy Analysis Capabilities.

The requests for EIA to conduct carbon analysis and produce projections on the international level continue to increase. Currently, EIA's international modeling capability is unable to assess the economic consequences on the United States of energy-related compliance options, commitments, and actions of foreign countries. EIA does not have the policy analysis capabilities, or the capability to represent emissions trading between countries and/or regions. With the requested funding, EIA will continue to engage Federal staff and contractors in the development and/or acquisition of an international modeling capability to assess energy policies, technological change, and international carbon permit trading schemes. Started during FY 1999, the goal of this multi-year project is to acquire an international modeling capability, develop a framework for the modeling of international permit trading schemes using this capability, and ensure consistency with the U.S. projections from the National Energy Modeling System (NEMS). EIA plans to complete this initiative following two additional years of effort, at which time EIA will be in the position to provide reliable analysis and projections on international policies.

In FY 2001, EIA will develop a preliminary version of the model, System for Analysis of Global Energy Markets, based on the project requirements as defined in EIA's Report: "Design and Development Plan for the System for Analysis of Global Energy Markets". Also, in FY 2001, EIA will use this preliminary model to produce the forecasts for the International Energy Outlook 2001. The model methodologies will be enhanced over the next two fiscal years to represent the critical areas of regulation, technological improvement, and international carbon permit trading.

! Confront and Correct Critical Petroleum and Natural Gas Data Quality Issues.

(1) Weekly/Monthly Petroleum Supply Data Quality Control - The accuracy of petroleum supply and demand data is deteriorating. The loss of accuracy is the result of a long, slow deterioration in the quality of the data reported to the EIA that cannot be fully analyzed and corrected with the current level of resources. With the large volume of mergers, acquisitions, joint ventures, and company asset sales, EIA has found it increasingly difficult to track and monitor the changes in the industry while maintaining its petroleum frames (that is, up-to-date lists of potential respondents). EIA will engage Federal and contract staff to increase our efforts to identify the causes of the data quality deterioration, and implement processes to improve and maintain the high data quality needed to provide an accurate understanding of the petroleum industry and petroleum markets. Beginning in FY 2001, EIA estimates this project will take two years to complete.

(2) Petroleum Form Changes to Maintain Relevance - As environmental regulatory changes mandated under the Clean Air Act Amendments of 1990 are entering Tier II, new standards for low sulfur gasoline, national versus regional standards, low sulfur diesel, and other diesel specification changes will be implemented. In addition, environmental concerns over the use of ethers in gasoline, particularly MTBE, are leading to discussions of a ban on this significant gasoline component. These changes will necessitate changes in EIA's survey forms and reporting system as early as 2002. Starting in

FY 2001, the additional funding will support Federal and contractor staff to: (1) conduct analyses on the impact of these regulatory changes, and (2) modify survey reporting forms. Beginning in FY 2001, EIA projects this project will take two-years to complete.

The quality issues cited above are critical to the continuation of EIA's ability to provide accurate and timely petroleum information. If additional funding for these short-term initiatives and ongoing work is not made available, EIA proposes to terminate the operation of two State-level data surveys: the EIA-821, "Annual Fuel Oil and Kerosene Sales Report," and the EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption," and two crude surveys: the EIA-182, "Domestic Crude Oil First Purchase Report," and the EIA-856, "Monthly Foreign Crude Oil Acquisition Report." The resources needed to operate these surveys, would be used to begin addressing the required upgrades in the previously cited oil survey data and information processing systems.

(3) Quality & Timeliness of Natural Gas Production Data - EIA continues to witness a deterioration in the timeliness of responses to natural gas surveys. Although changes underway in survey design and approach should address most of these issues, in the interim, EIA has increasingly relied on imputation and early estimation procedures in order to release these data in a timely manner. The principal impediment to improved timeliness relates to the sources of the information, which relies on State agencies and the Minerals Management Service. These respondents collect information to support their core activities and then must synthesize information to develop abstracts in order to complete the EIA forms. This synthesis is a time-consuming process, which is a key contributing factor to the deterioration in the timely submission of data to EIA. For this task, EIA proposes to engage Federal and contractor staff to develop and implement improved methods of receiving reliable and timely data. Beginning in FY 2001, EIA estimates this project to take two-years to complete at $40 thousand for this year.

(4) Crude Oil Production System Redesign - This EIA information system is over ten-years old and needs to be reprogrammed in order to function within the current information technology base. EIA resources were significantly taxed to cope with poor and late data reporting and radical changes in price and production levels during 1998. This resulted in poorer oil production estimates, and the need for an unusual number of data revisions. Requested funding will be used by Federal and contractor staff to upgrade the system. The upgraded system will have the compatibility to interface with other EIA data systems, and provide the necessary flexibility, timeliness, and quality assurance to support the monthly and annual dissemination of oil production data at the State level. Beginning in FY 2001, EIA estimates the cost of this one-year project at $50 thousand.

(5) Update/Rewrite Oil and Gas Integrated Field File (OGIFF) System - EIA's OGIFF database is the premier U.S. tool for analyzing proved oil and gas reserves and ultimate recovery appreciation. The current system is over 10-years-old and is written in a data base language no longer supported. It is not cost effective to update the current system as the expertise is no longer available for this unsupported data base language. With the requested funding, EIA will engage Federal staff and contractors to rewrite the OGIFF system for operation on a contemporary SQL database. Starting in FY 2001, EIA estimates the cost of this one-year project at $130 thousand.

- Continued Development of Common Collection and Processing System (CCAPS) - Integrate Energy Surveys and Incorporating Data Collection.

EIA's is continuing the development and integration CCAPS survey data collection and processing. The goal is to significantly reduce data collection and processing costs, reduce software life-cycle costs, and to continually add value by improving the timeliness of energy information provided for EIA respondents and customers. To date, several coal and natural gas surveys have been transitioned into CCAPS. EIA plans to place these surveys in operation during the year 2000 survey cycle. During FY 2000, EIA will begin to transition the petroleum supply surveys. During FY 2001, EIA plans to complete the integration of the petroleum supply surveys into CCAPS, and begin work on the remaining EIA energy surveys' transition into the CCAPS data processing structure. In addition, EIA plans to start incorporating data collection into the CCAPS framework to enhance the efficient flow of energy data collection to processing. CCAPS will incorporate a variety of collection methods including Internet, mailed software (the successor to EIA's PEDRO), and mailed paper forms.

During FY 2001, EIA plans to start work on integrating a common data querying and extraction capability within CCAPS. With this capability, CCAPS will be able to calculate all the aggregates within and across surveys. CCAPS will also provide a flexible tool for developing drafts of modified or new tables being considered for dissemination. Once the development of CCAPS for survey data processing is complete, and in keeping with our Strategic Plan, it is EIA's plan to integrate an On-Line Analytical Processing (OLAP) capability to provide users easy access to the data. Initially, an OLAP system will be developed for EIA's Local Area Network (LAN) users, with the long-term goal of providing this capability to the public via the Internet. EIA estimates the cost in FY 2001 to pursue these CCAPS initiatives to be $500 thousand.

Efficiency Investments

EIA will continue to improve its base programs through investing in methods and integrating technologies that achieve efficiency gains. Over the past several years, EIA has invested in new, streamlined data systems, increased use of personal computers, enhanced local area networks, and upgraded servers and enterprise servers, to access, process, and disseminate information. EIA plans to continue these endeavors, with an increasing number of EIA products being disseminated only in electronic form. Other cost savings will occur through eliminating redundant practices, by continuously aligning our workforce of Federal and contractor staff to efficiently and effectively address EIA's evolving requirements. In addition, EIA will continue analyzing processes with the purpose of streamlining operations, reducing time requirements, retiring or replacing systems which are inefficient or no longer required, and consolidating program functions where efficiencies can be attained.

EIA Omnibus Procurement

With the purpose of improving EIA's contractor cost efficiency, the EIA Omnibus Procurement (EOP) was awarded in mid-December 1997. This action represents a fundamental change in the way EIA awards tasks. Prior to this initiative, EIA employed several contractors who were individually selected following a long competitive process. Tasks awarded to these contractors were on a cost-plus-fixed-fee basis. With a cost-plus-fixed-fee task, the actual cost of each task is not known until the work was completed, so the final costs of some cost-plus-fixed-fee tasks are higher than

expected. With the ability provided within the EOP to issue firm-fixed price tasks, EIA knows what a task will cost with far less potential for unexpected or unanticipated cost increases at the conclusion of the task.

The EOP award also supports EIA's Business Reengineering goals which promote continuous efficiency improvements. In addition, the EOP award supports the goals stated in the Federal Acquisition Streamlining Act (FASA) which promotes simplification of procurement and increased use of competition at the task level through the use of multi-award contracts. To pursue this contract efficiency initiative, EIA established a Procurement Planning Advisory Group. This group collaborated with the Department, the Office of Management and Budget, and the Small Business Administration, to investigate alternatives to improve EIA's task award cost effectiveness. The group's efforts resulted in the EOP.

The EOP is a multi-award contract with three functional areas: Information Management and Product Production, Energy Analysis and Forecasting, and Information Technology. With the EOP, small, 8(a), and small disadvantaged businesses having significant opportunities to contend for all competed task orders within their functional area. EIA started awarding task orders under the EOP in May 1998, with a goal of 10% being firm-fixed price task orders. For FY 1999, of the 143-task orders were awarded, 53% of the task orders are firm-fixed price.

With the EOP and competition at the task level, EIA is maximizing the opportunity to receive the best value for every tax dollar used to engage contractor support. In addition, the previous method of competing every individual contact was replaced with a more cost effective multi-award contract competition. As a forerunner in the Department of Energy headquarters in implementing a multi-award contract, EIA has lead the way for other parts of the Department considering this type of contracting to improve the efficiency and effective use of their contractor support.

STAFFING

In the Department of Energy's Workforce 21 Initiative, EIA's FY 2001 end-of-year Federal staffing level is 375 FTEs. EIA plans to rely on normal attrition and prioritized hiring to maintain Federal staffing level. With the revised Federal staff targets, and through the initiation of a staff replacement program, EIA will be able to address our projected deficits in industry expertise and leadership demographics.

For FY 2001, EIA's salary and benefit costs are estimated to be $35.130 million, or 47% of EIA's $75.0 million request. This estimate assumes an FY 2001 FTE level of 375, no reduction-in-force, OMB personnel cost projections, and a normal attrition rate.

EIA plans to continue the development of Federal staff capabilities to address EIA's future critical needs, and make economical and effective use of contractor support where appropriate. At requested resource levels, EIA estimates a reduction in use of contract support from a FY 1995 ratio of 1.0 Federal personnel to 1.2 contractor staff, to a 1.0 Federal personnel to 0.62 contractor staff. That is about a 50% reduction.

In conjunction with EIA's strategic planning process and workforce management endeavors, EIA will continually examine its staff skill mix and plans to assure future employee development and training needs are addressed. EIA will continue to accomplish its mission by continuously reassessing and realigning its portfolio of products and services, with an increasing reliance on Federal staffing, and the integration of evolving information management and communications technologies.

LINK TO DEPARTMENT STRATEGIC PLAN

As part of the Energy Resources Strategic Goal, DOE committed to "carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives." EIA is responsible for two action items to support this Departmental objective: (1) increasing the number of unique monthly users of EIA's Web Site, and (2) the dissemination of EIA's midterm forecasts as contained in the *Annual Energy Outlook*. Significant growth in the usage of EIA's Web Site is discussed in the section "Increasing Customer Usage." In FY 2001, EIA is planning to continue publishing the *Annual Energy Outlook*. These items are reflected in the DOE FY 2001 Annual Performance Plan as Item ER5-1.

PERFORMANCE RESULTS

EIA's major output is energy information. The purpose (outcome) of EIA's energy data collection, analysis and dissemination endeavors is to promote sound policymaking, efficient markets and public understanding. Because assessing the level of achievement of these ultimate outcomes is very difficult and costly, we approximate overall achievement of our mission by measuring customer satisfaction levels and product usage. EIA tracks product usage levels in many ways (number of Web site files downloads, number of publications mailed out, number of customers and the products they use, number of telephone inquiries, and number of media citations, etc.). EIA measures customer satisfaction through surveys and focus groups. Both customer satisfaction ratings and usage levels are significant. The results also show that while EIA is accomplishing our mission, has made improvements, and has a growing list of

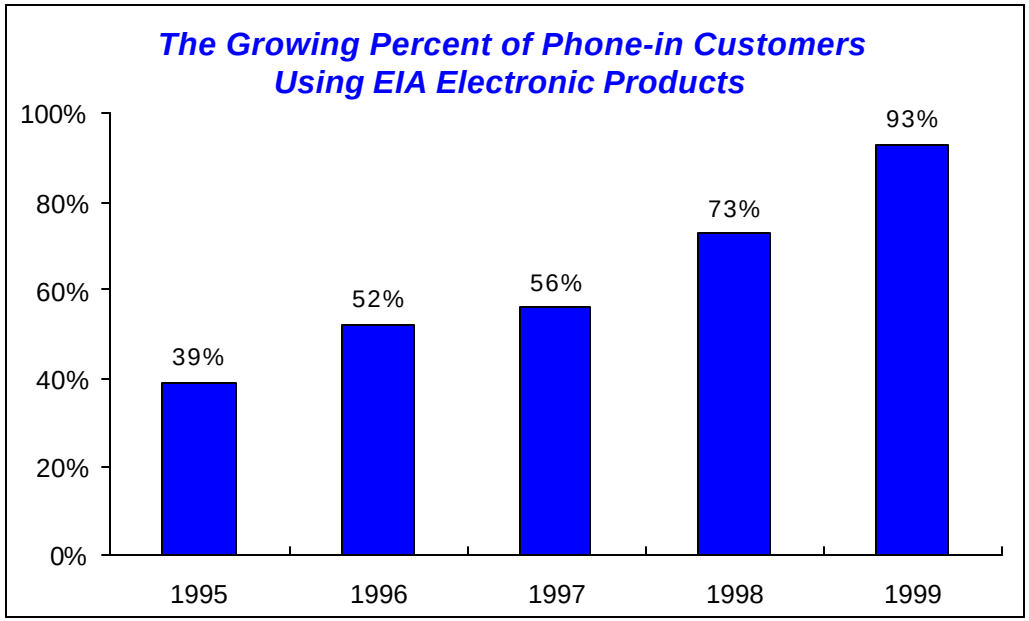

Figure 6

satisfied customers, there are still areas which can benefit from improvement. EIA's financial and market results indicated that in spite of overall reductions in both funding and staffing between FY 1995 and FY 1999, EIA has expanded our customer base and improved our products' attributes. Through large-scale electronic and media dissemination of our products, EIA has improved the availability of energy information while reducing printing and distribution costs. EIA will continue to focus on achieving higher levels of efficiency and effectiveness.

Customer Satisfaction and Survey Activities

EIA has conducted an annual survey of its telephone customers each year since FY 1995, establishing a continuing time series of performance results. EIA has also conducted surveys of users of its Web site, CD-ROM, and other energy data dissemination methods, and more than 2,000 recipients of EIA printed publications. In all of these surveys, customers are asked to rate their overall satisfaction, and rate EIA on five attributes of customer service (courtesy, promptness, accessibility, knowledge of the material, and ability to understand customer needs) and on five attributes of product quality (availability, relevance, accuracy, comprehensiveness, and timeliness).

In each year since FY 1995, at least 95% of EIA's telephone customers reported they were either satisfied or very satisfied with EIA's overall customer service. In addition, the number of customers using EIA electronic products has increased drastically (see Figure 6).

In terms of the EIA products' quality, telephone customer satisfaction ratings overall are also high (86% to 94%) over the past five years. Furthermore, a one-time question in 1997 was added (at the request of DOE's Office of Quality Management) which showed that 87% of telephone customers trusted EIA to provide a quality product to a "great extent" or "completely." However, among the five quality attributes, timeliness has historically had lower satisfaction scores. EIA has specifically targeted timeliness (which includes decreasing the time between when data are collected and when they are ready for dissemination, and increasing the speed of dissemination) as a key area of improvement. A new Web site customer survey to be fielded early in FY 2000 will follow-up with our customers on product timeliness improvement.

EIA collects energy data from respondents who are required to fill out survey forms. The more intuitive and understandable the forms, the higher quality the data. In 1998, EIA initiated three projects to redesign specific survey forms, one using focus groups and two using a technique called cognitive interviewing. This process involves respondents completing a survey with an interviewer while "thinking out loud," so the interviewer can see how they interact with the questionnaire and what meanings they get from terms and instructions. (Prior to 1998, EIA relied heavily on post-collection techniques, such as error checks and periodic expert reviews.) In June 1998, EIA used cognitive interviewing to test a redesign of the Manufacturing Energy Consumption Survey, prior to the 1999 data collection cycle. The revised version is longer but has a more intuitive design, and instructions printed throughout the survey directly in places where respondents need to read them (rather than in a separate booklet). In redesigning this survey, EIA conducted cognitive interviews at seven local manufacturing establishments, then revised the survey and pretested it. Respondents, who agreed to serve as pretest subjects, reported the revisions improved the survey design, the new format was easier to follow, and the additional length of the survey was not a concern.

EIA staff was trained in conducting cognitive interviews so these techniques can be used on other EIA data collections. In the near term, EIA plans to employ cognitive interviewing as a part of the information collection redesign efforts in the natural gas area. Building on these successes, EIA plans to make use of focus groups and cognitive interviewing as key processes in revamping energy surveys.

Increasing Customer Usage

EIA has engaged in an aggressive program to expand the availability of electronic information, upgrade energy data dissemination, and enhance coverage of energy information issues in the news media. This increased use of electronic technology (Internet, CD-ROM, etc.) for energy data dissemination has led to an explosive growth in the number of customers for our data, as well as increased the breadth of information distributed. For example, the growth in monthly users of EIA Web site is remarkable (see Figure 7 - note numbers of monthly users do not include EIA employees accessing the site). Rapid growth like that seen in the use of EIA's Web site access is evidenced in Web site file access. Of note, during 1997, EIA set a goal to increase the average number of unique monthly users of its web site by 20% annually, from a baseline of 37,000 users sessions. Between

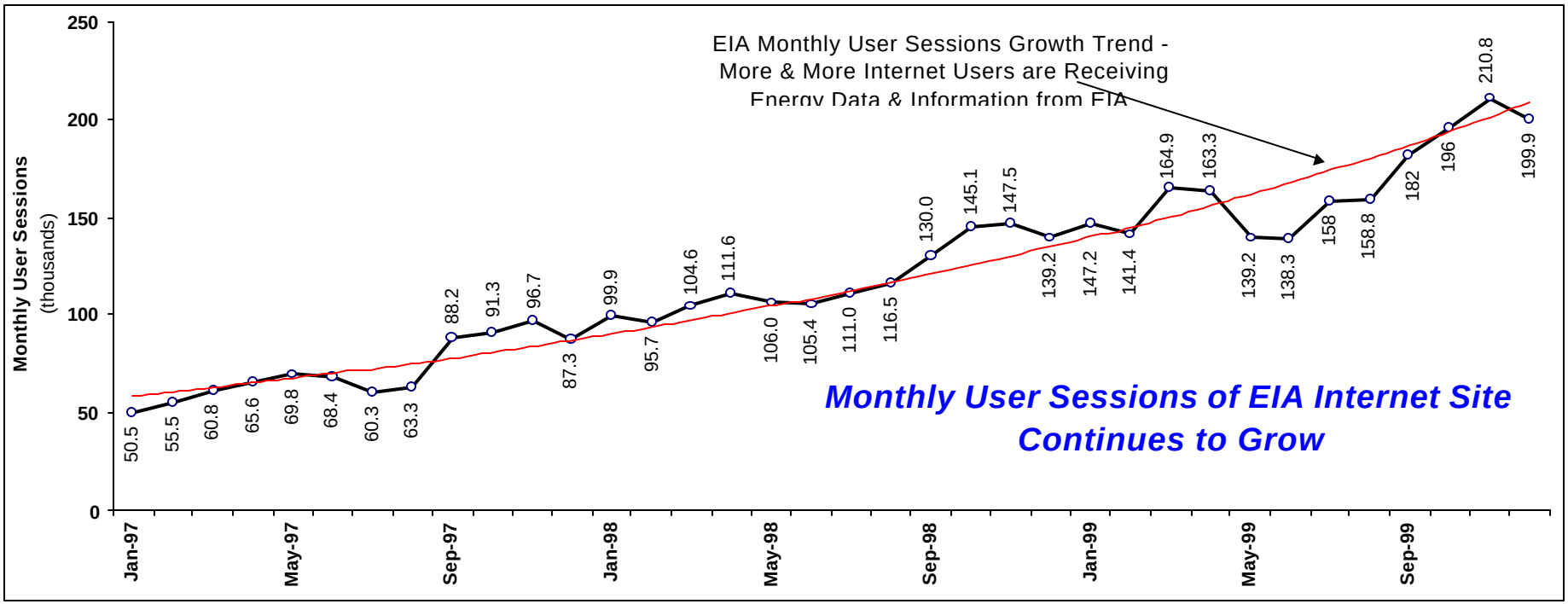

Figure 7

1996 to 1997 the growth in usage was 180%. By the end of 1997, EIA exceeded the goal with an average of 71,500 user sessions. By the end of 1998, EIA averaged 87,000 user sessions, again exceeding the goal. For 1999, EIA averaged 163,600 monthly user sessions, an increase of more than 64.7% when compared to the 1998 average monthly usage level. For December 1999 EIA was witnessing about 200,000 user sessions. For 1999, information downloaded from the EIA Web site averaged 94 gigabytes per month, or about 1.13 terabytes of energy information for the year. For December 1999, 1.4 million files were downloaded. This represents a 76% increase when compared to December 1998.

One result of the increase in the electronic availability of our information has been a dramatic increase in the number of customers contacting the National Energy Information Center for on-line support. For example, e-mail traffic is up nearly 114% between 1998 and 1999. Another result of our expanded use of electronic dissemination is a 35% reduction in the number of paper publications and a 50% reduction in publication printing costs since 1994, which results in avoiding more than $500,000 in expenditures per year.

EIA has dramatically increased the distribution of its information by becoming the dependable source of objective energy information for the news media. This has enabled our energy data to be widely use by the general public with minimal cost to the agency (Figure 8). In addition to the steady growth in media use of EIA information, public concern about price volatility in the gasoline and heating oil markets led to the increases in media citations in the spring of 1996, the winter of 1997, and the fall and winter of 1998-1999.

Another example of outcomes and impact, is the number of copies of EIA's recent brochure "Why Do Natural Gas Prices Fluctuate So Much?" being requested by natural gas companies for distribution to their customers. These natural gas companies see this brochure as an excellent way to explain to their customers why natural gas prices fluctuate. In addition, natural gas companies can note that this information was prepared by a non-biased source.

Perhaps the area most difficult to quantify is the impact of EIA's data on the policy development process. EIA has substantial evidence that our information and analyses are sought prior to legislative action. Most recently, as the restructuring of the electric power industry has moved to the front of the energy debate, EIA's briefing on how the industry works have been presented to more than 50 Congressional staff, principally from the Senate Energy and Natural Resources Committee. EIA's Administrator was requested to testify before the Energy and Power Subcommittee of the House of Representatives on future competitive electricity prices. EIA's brochure "The Restructuring of the Electric Power Industry - A Capsule of Issues and Events" which clarifies the complex issues involved, is one of the most popular files on our Web site with more than 2,000 printed copies distributed. EIA was requested by the Chairman and ranking minority member of the House Science Committee to prepare a study on the cost and economic impacts of proposed reductions in greenhouse gas emissions, in accordance with the Kyoto agreement. EIA believes the inclusion of our policy-neutral input on these major issues will help result in informed debate and sound policy decisions.

Of special note, EIA's Web site has won several awards for quality and content. Most recently, EIA's Web site was selected by *Government Executive* magazine as one of the best sixteen Federal Web sites for 1999, from 120 nominated web sites. In the announcement of the winners, *Government Executive* stated, "EIA is a tiny agency, so the comprehensiveness of its site - and its ease of navigation - amazed the judges. Everyone

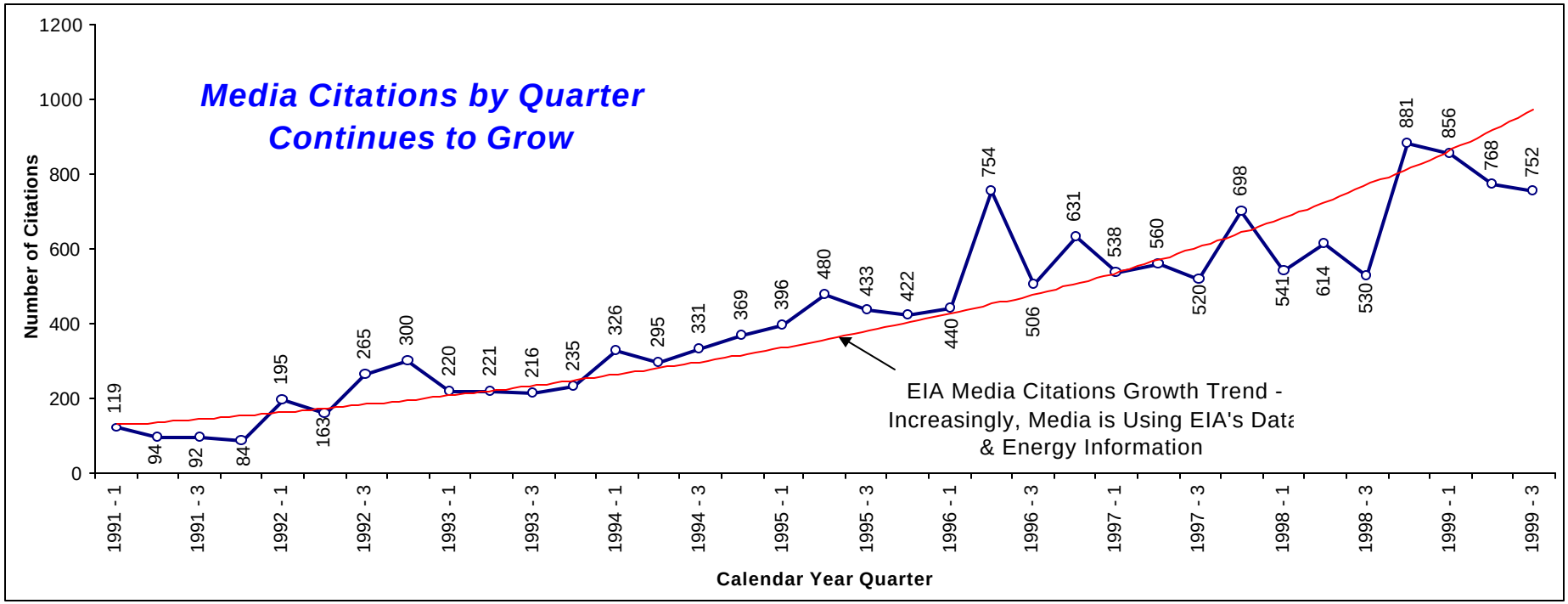

Figure 9

who works in the energy industry is well-served by this site." EIA also was commended for making full use of the power of e-mail by featuring e-mail notification lists for more than 30 different energy subjects.

In summary, EIA is serving a growing customer base, and achieving high levels of customer satisfaction with our energy data, analyses, forecasts, and timeliness. During FY 2001, EIA expects to receive 3 million inquires for energy information. To meet future customer requirements, EIA will need to leverage evolving information processing and communications technologies, explore and develop innovations to improve our capabilities, and align our resources to effectively meet the energy information needs of Government, industry, and the public.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(dollars in thousands)
PROGRAM FUNDING PROFILE
National Energy Information System

Activity	FY 1999 Enacted	FY 2000 Enacted [1]	FY 2001 Base	FY 2001 Request	Program Change Request vs. Base Dollar	Program Change Request vs. Base Percent
Oil and Gas						
Operating Expenses	$ 17,555	$ 18,197	$ 18,197	$ 19,249	$ 1,052	5.8%
Coal, Nuclear, Electric, and Alternate Fuels						
Operating Expenses	$ 9,979	$ 10,810	$ 10,810	$ 10,600	$ -210	-1.9%
Energy Markets and End Use						
Operating Expenses	$ 9,067	$ 9,845	$ 9,845	$ 10,355	$ 510	5.2%
Integrated Analysis and Forecasting						
Operating Expenses	$ 8,366	$ 9,112	$ 9,112	$ 9,122	$ 10	0.1%
Information Technology						
Operating Expenses	$ 9,795	$ 9,014	$ 9,014	$ 9,629	$ 615	6.8%
National Energy Information Center						
Operating Expenses	$ 2,199	$ 2,213	$ 2,213	$ 2,314	$ 101	4.6%
Statistics and Methods						
Operating Expenses	$ 2,255	$ 2,399	$ 2,399	$ 2,408	$ 9	0.4%
Resource Management						
Operating Expenses	$ 11,284	$ 10,778	$ 10,778	$ 11,323	$ 545	5.1%
SUBTOTAL	$ 70,500	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%
Use of Prior Year Balances [2]	- 315	- -	- -	- -	- -	- -
TOTAL	$ 70,185	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION

Proposed Appropriation Language

For necessary expenses in carrying out the activities of the Energy Information Administration, [$72,644,000] *$75,000,000*, to remain available until expended.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(Tabular dollars in thousands, Narrative in whole dollars)

PROGRAM MISSION

On line and off the shelf, the Energy Information Administration (EIA) is the first place to go for the last word in energy information. The EIA is a leader in providing high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding. As part of EIA's strategic plan, the following goals have been set:

- Assure products and services are relevant to the needs of customers
- Assure data, analyses, and forecasts are of the highest quality
- Provide customers fast and easy access to public energy information
- As a performance driven organization, conduct business in an efficient and cost-effective manner
- Work together to achieve the full potential of a diverse workforce

As an independent statistical/analytical agency, EIA has two principal roles. First, EIA's primary responsibility is to conduct the functions required by statute. These functions include the development and maintenance of a comprehensive energy database, and the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors. EIA also prepares specific reports which are required by law. Second, EIA responds to inquiries for energy information. The primary customers of EIA services are public policymakers in the Department of Energy and the Congress. Customers include other agencies in the Executive branch and independent agencies of the Federal Government, State and local governments, the energy industry, educational institutions, the news media, and the public. To preserve credibility with this broad client base, EIA maintains its independence from policy development. Consequently, EIA's role is to provide data and perform analyses. EIA does not develop or take policy positions. EIA has analyzed, and will continue to analyze, policy proposals generated elsewhere. EIA's strategy is to make its broad mix of products and services available to its customers through the continued use of publications, and an expansion of electronic dissemination via the EIA web site and CD-ROM.

REQUEST

EIA's FY 2001 Congressional budget request is $75.0 million. This request is $2.4 million over our FY 2000 appropriation of $72.6 million and 11.4% below the FY 1995 appropriation of $84.6 million (or 18.8% below after adjusting for inflation). As can be seen in Figure 1, EIA's budget has undergone a dramatic decrease over the past two decades, resulting in a reduction of 57.5% (adjusted for inflation) since FY 1980. In FY 2001, EIA intends to continue our base program, enhance international analysis capabilities, begin work associated with assessing the accuracy and reliability of several energy data systems, continuing overhauling several survey frames and data systems, and seek further efficiency gains through the use of information processing and communications technologies.

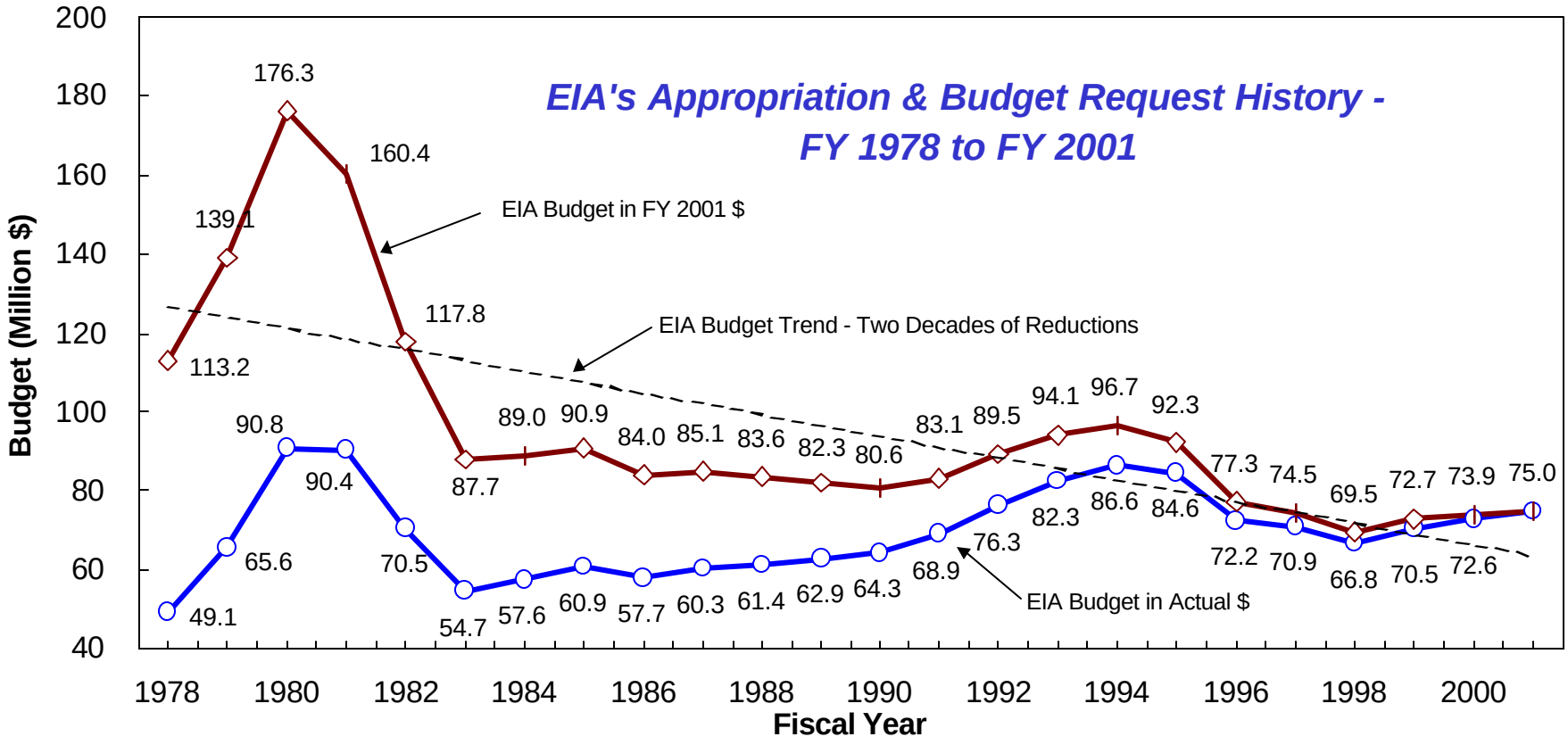

Figure 1

EIA continues to stand alone as the only statistical agency to absorb significant budget reductions since FY 1994 (see Figure 2). As one of the Federal Statistical Agencies, EIA has one of the smallest annual budgets, accounting for only 1.8% of the total FY 2000 U.S. statistical agencies budget requests (see Figure 3).

EIA has also absorbed significant Federal staff reductions. The work formerly done by these employees was not shifted to contractors, as EIA absorbed even greater reductions in contractor staff levels. Since 1995, EIA's total workforce, including both Federal and contractor employees, has decreased from approximately 1000 personnel to approximately 674 personnel in 1999, a 33% reduction.

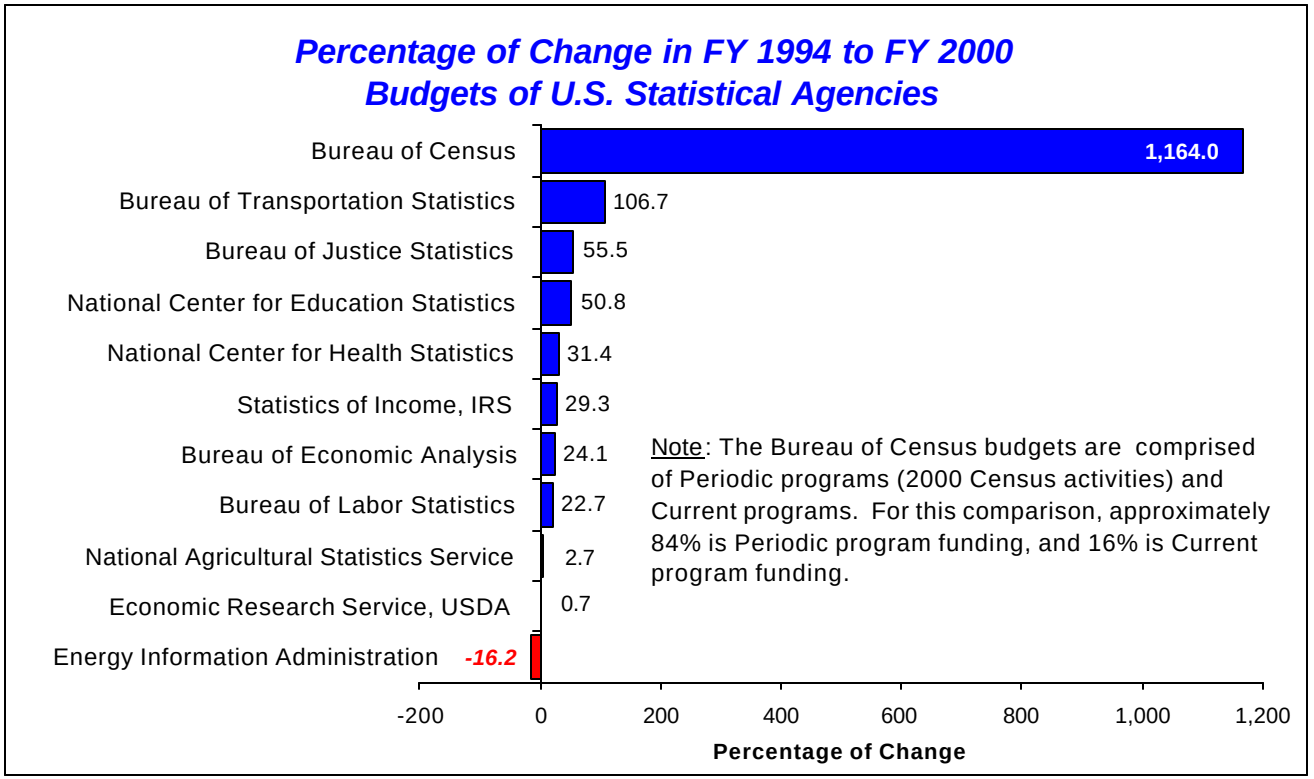

Figure 2

Base Program

In FY 2001, EIA's base program will consist of the maintenance of a comprehensive energy database, the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors, the maintenance of the National Energy Modeling System for midterm energy markets analysis and forecasting, the maintenance of the Short-Term Integrated Forecasting System for near-term energy market analysis and forecasting, customer forums and surveys to maintain an up-to-date product and service mix, and the continued expansion of electronic information dissemination via the EIA Web site and CD-ROM.

Program Investments

For FY 2001, EIA will continue to focus on: (1) The overhaul of EIA consumption surveys to update these 20-year-old surveys, (2) The overhaul of the natural gas and electricity surveys and data systems to recognize and accommodate the changes in the natural gas and electricity industries brought on by deregulation and restructuring. (3) Enhancement of EIA's international analysis capabilities in order to assess carbon mitigation, permit trading, and other global climate change issues. (4) Reversing the deterioration in data quality and accuracy in several energy areas.

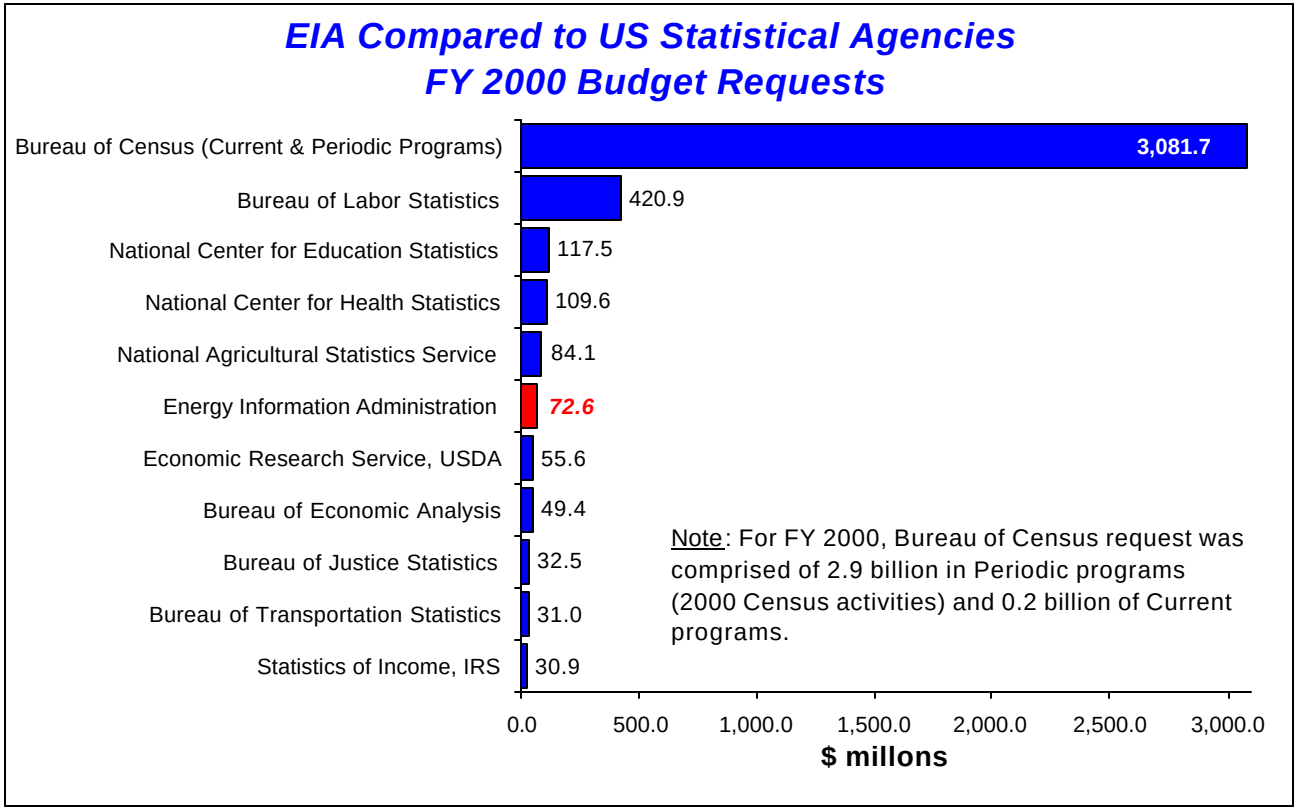

Figure 3

Initiatives

! Continue Overhaul of the Energy Consumption Surveys - Reconstructing a 20-year-old design.

EIA's energy consumption surveys are the Nation's most comprehensive source of data on energy use in major sectors of the United States economy. These surveys also include the characteristics of energy users. EIA presently has surveys in place covering 3 major sectors: households, commercial buildings, and manufacturers. The data from these surveys enlighten public policy debate on energy programs and issues, describe the potential markets for technology and energy efficiency improvements, and contribute to public understanding of energy use and its environmental impacts.

For several reasons, the consumption surveys will become more visible and critical over the next several years. Two principal reasons are: (1) The debate on greenhouse gas emissions and global warming potential will cause the United States, as well as other countries, to assess and understand the impact from major sources of emissions generated by human activity. (2) With the restructuring and deregulation of the electric and natural gas

industries, energy use and price data, especially at the consumers' level, are much more difficult to obtain from suppliers. This type of information will be especially useful to State governments, who are currently working with EIA and increasingly rely on EIA data to understand and effectively manage the current and emerging effects of energy industry restructuring's impact on energy consumers in their State.

In FY 2000, EIA initiated a redesign of the consumption surveys. This redesign initiative is critical because EIA's energy consumption surveys will have operated for more than 20 years based on the same statistical frame design. (Frame design is the complete population from which a statistically representative sample is drawn). This is far beyond the usual 10-year life-cycle tied to the census, but funding was not provided to update the surveys following the 1990 census. (Common statistical practice with complex area samples, especially those employing area-based designs, is to redesign after each decennial census to realign the coverage of the survey in order to reflect the current population demographics.) The sequential updating methodology used over the last 15+ years is a less than optimal method as compared to a decennial redesign in attempting to keep the current consumption surveys as up-to-date as possible. However, the performance and reliability measures of EIA's consumption surveys started to indicate deterioration. For example, commercial building square footage estimates from the 1995 Commercial Building Energy Consumption Survey declined from the level measured by the previous survey (Figure 4), a result at odds with all economic indicators of commercial activity.

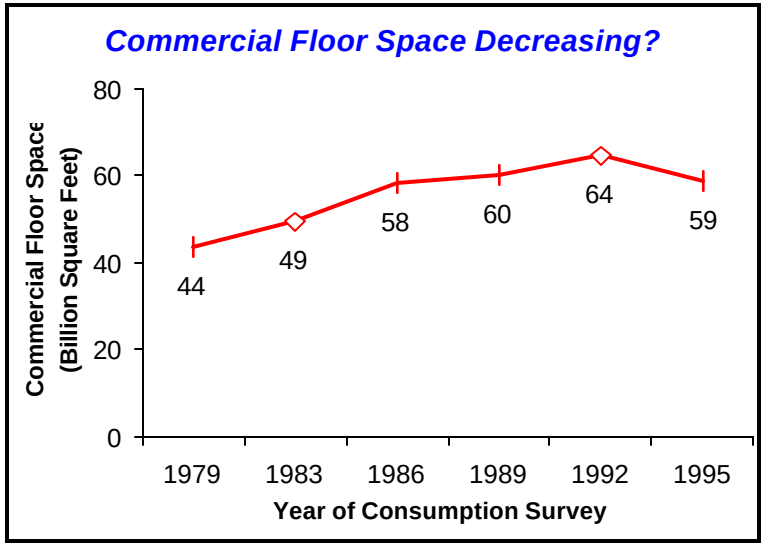

Figure 4

Funds will be used to continue support of Federal and contractor staff engaged in updating the survey frames and sampling. The redesign will realign the consumption surveys' coverage with the distribution of residential and commercial buildings populations as indicated by the 2000 census. Started in FY 2000, this multi-year effort within Energy Markets and End Use is expected to continue through FY 2001 and for three additional years, after which the updated sample design, survey frames, and data systems will be fully implemented. EIA estimates the cost for completing the consumption surveys redesign will be $600 thousand per year.

- Maintain Quality of Energy Consumption Data

Because of the increasing importance of consumer-based data, it is critical to maintain the quality of the data from these surveys. Starting with FY 2001, additional resources are needed to support the operation of these surveys. A permanent addition of $550 thousand in Energy Markets and End Use funding is needed to offset unavoidable increases in survey costs due to (1) the tight labor market for survey field workers; (2) the increasing amount of work needed to keep survey response rates high in the current cultural climate, with respondents increasingly more difficult to reach and more resistant to completing surveys; and (3) the need for expanded and more complex energy consumption and expenditures data collection procedures due to the more complex energy supply structure resulting from the natural gas and electric industry restructuring. Over the past several years, ongoing requirements for EIA to fund annually increasing survey costs from a decreasing budget have eroded EIA's capability to continue operating the three consumption surveys in a way that ensures high-quality data, and have required EIA to conduct these surveys once every four years.

If a permanent increase in EIA's operational base is not provided in FY 2001, EIA will need to choose one or more courses of action:

(1) Eliminate the personal interviews, changing to telephone or mail surveys and/or lengthen the time between surveys to 5 or more years. This course will increase levels of non-response, reduce callback efforts to convert non-respondents, and reduce editing and data cleanup activity. All of these outcomes will degrade the quality and integrity of the energy consumption data.

(2) Discontinue one of the surveys in order to maintain the quality of operations, and the resulting data, for the other two. This results in the loss of information in one of the consumption sectors.

- Continue Overhaul of the Electricity Surveys and Data Systems - Capturing Changes in a Restructured Industry.

In FY 1999, EIA initiated a multi-year effort to overhaul the surveys used to gather information from this nation’s restructuring of electricity generation and distribution. All of the EIA areas associated with electricity data collection, analysis, and reporting are undergoing significant revision and overhaul to reflect this evolving competitive industry. EIA will continue to make use of Federal and contractor staff to complete revision of the forms used to collect data, to develop new survey forms to reflect the unbundling of services, develop and implement new computer systems to process the information, and develop new data disclosure methods to protect the confidentiality of proprietary information. EIA estimates the FY 2001 and next year’s costs for the overhaul of the electricity surveys to be $1.0 million each year. To date EIA is on schedule with this effort, and plans to complete this endeavor in FY 2002 with the full implementation of the overhauled electricity data collection and reporting systems.

! Overhauls of Surveys and Data Systems Are Continuing in Order to Reflect Changes in the Restructured Natural Gas Industry.

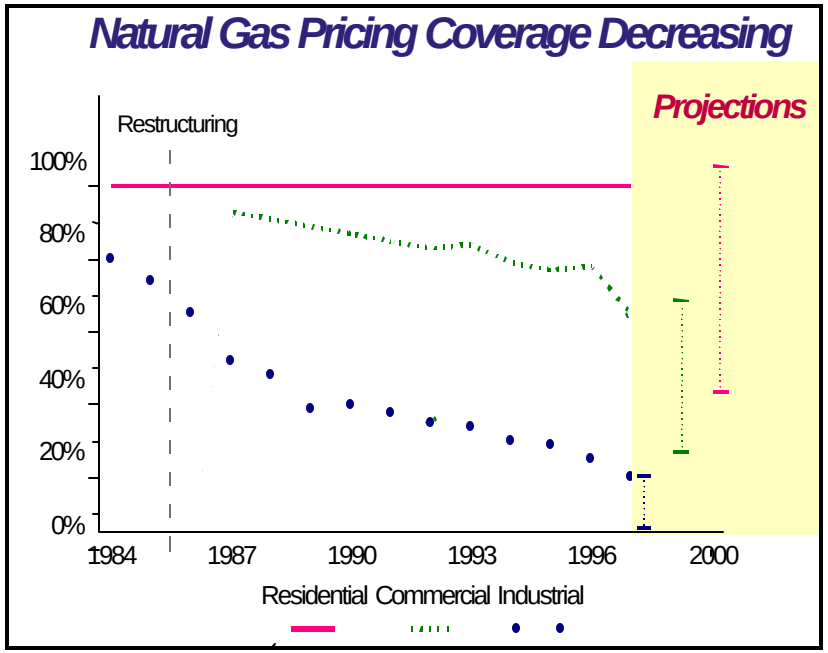

Figure 5

EIA's ability to provide data and information on the natural gas industry has been severely challenged by changes in the regulatory environment and corresponding industry restructuring. In FY 1998 for example, industrial price information for only 15% of the gas used by industrial customers was captured by EIA surveys, down from 75% coverage in FY 1984 (see Figure 5). Furthermore, coverage in the commercial areas dropped from more than 90% in FY 1987 to about 65% in FY 1998. With a move toward more competition at the retail level for residential and small commercial customers, coverage of the prices paid could be substantially reduced from the nearly 100% level of coverage we currently have. In addition, there are major segments of activity relating to prices and volumes for which no information is collected by EIA, such as the cost of underground storage, the cost of transportation, and price and physical transactions at market centers and market hubs.

Restructuring of the electric industry will also effect the information available on prices paid by electric generators for natural gas. Since natural gas is usually the swing fuel in electric generation, information on these prices is essential in understanding the fuel decisions made by electric generator operators and the subsequent impact on electricity prices. With the requested funding, EIA will continue to employ staff and contractors to progress on a three-phase plan to overhaul the natural gas surveys and data systems. The three phases are: (1) collect detailed information on the evolving structure and operation of the natural gas industry identifying critical data needs and sources; (2) develop and field test natural gas surveys and data systems; and (3) implement the overhauled natural gas survey and data systems. This multi-year overhaul of the natural gas data collection and data systems will continue for one more year when the updated systems are fully implemented. For FY 2001, EIA estimates the cost to continue the overhaul of the natural gas surveys and data systems to be $800K.

Starting with FY 2001, EIA is requesting a permanent increase of $175 thousand to provide the funding needed to address natural gas industry frames' (the universe of potential respondents) maintenance. With changes in the natural gas industry, maintaining frames for the existing populations has become increasingly difficult. This difficulty results from the new corporate entities being formed to market natural gas, as well as merger and consolidation activity in the industry. In addition, corporate downsizing and staff turnover has also increased the effort required by EIA to track changes in the industry. EIA Federal and contractor staff resources are not adequate to monitor the changing structure and rapidly changing market participants. To address these deficiencies, EIA needs to institute a higher level of frames' maintenance than was needed when the industry was regulated. With the requested increase, EIA would have the resources needed to: (1) monitor mergers, acquisitions, corporate reorganizations, and the

formation of new companies in the natural gas industry, (2) continually assess the impact of those corporate changes on reporting requirements, and (3) continually assess the impact of these ongoing corporate and industry changes on EIA's operation and processing of monthly and annual surveys.

! Continue Enhancement of International Energy Analysis Capabilities.

The requests for EIA to conduct carbon analysis and produce projections on the international level continue to increase. Currently, EIA's international modeling capability is unable to assess the economic consequences on the United States of energy-related compliance options, commitments, and actions of foreign countries. EIA does not have the policy analysis capabilities, or the capability to represent emissions trading between countries and/or regions. With the requested funding, EIA will continue to engage Federal staff and contractors in the development and/or acquisition of an international modeling capability to assess energy policies, technological change, and international carbon permit trading schemes. Started during FY 1999, the goal of this multi-year project is to acquire an international modeling capability, develop a framework for the modeling of international permit trading schemes using this capability, and ensure consistency with the U.S. projections from the National Energy Modeling System (NEMS). EIA plans to complete this initiative following two additional years of effort, at which time EIA will be in the position to provide reliable analysis and projections on international policies.

In FY 2001, EIA will develop a preliminary version of the model, System for Analysis of Global Energy Markets, based on the project requirements as defined in EIA's Report: "Design and Development Plan for the System for Analysis of Global Energy Markets". Also, in FY 2001, EIA will use this preliminary model to produce the forecasts for the International Energy Outlook 2001. The model methodologies will be enhanced over the next two fiscal years to represent the critical areas of regulation, technological improvement, and international carbon permit trading.

! Confront and Correct Critical Petroleum and Natural Gas Data Quality Issues.

(1) Weekly/Monthly Petroleum Supply Data Quality Control - The accuracy of petroleum supply and demand data is deteriorating. The loss of accuracy is the result of a long, slow deterioration in the quality of the data reported to the EIA that cannot be fully analyzed and corrected with the current level of resources. With the large volume of mergers, acquisitions, joint ventures, and company asset sales, EIA has found it increasingly difficult to track and monitor the changes in the industry while maintaining its petroleum frames (that is, up-to-date lists of potential respondents). EIA will engage Federal and contract staff to increase our efforts to identify the causes of the data quality deterioration, and implement processes to improve and maintain the high data quality needed to provide an accurate understanding of the petroleum industry and petroleum markets. Beginning in FY 2001, EIA estimates this project will take two years to complete.

(2) Petroleum Form Changes to Maintain Relevance - As environmental regulatory changes mandated under the Clean Air Act Amendments of 1990 are entering Tier II, new standards for low sulfur gasoline, national versus regional standards, low sulfur diesel, and other diesel specification changes will be implemented. In addition, environmental concerns over the use of ethers in gasoline, particularly MTBE, are leading to discussions of a ban on this significant gasoline component. These changes will necessitate changes in EIA's survey forms and reporting system as early as 2002. Starting in

FY 2001, the additional funding will support Federal and contractor staff to: (1) conduct analyses on the impact of these regulatory changes, and (2) modify survey reporting forms. Beginning in FY 2001, EIA projects this project will take two-years to complete.

The quality issues cited above are critical to the continuation of EIA's ability to provide accurate and timely petroleum information. If additional funding for these short-term initiatives and ongoing work is not made available, EIA proposes to terminate the operation of two State-level data surveys: the EIA-821, "Annual Fuel Oil and Kerosene Sales Report," and the EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption," and two crude surveys: the EIA-182, "Domestic Crude Oil First Purchase Report," and the EIA-856, "Monthly Foreign Crude Oil Acquisition Report." The resources needed to operate these surveys, would be used to begin addressing the required upgrades in the previously cited oil survey data and information processing systems.

(3) Quality & Timeliness of Natural Gas Production Data - EIA continues to witness a deterioration in the timeliness of responses to natural gas surveys. Although changes underway in survey design and approach should address most of these issues, in the interim, EIA has increasingly relied on imputation and early estimation procedures in order to release these data in a timely manner. The principal impediment to improved timeliness relates to the sources of the information, which relies on State agencies and the Minerals Management Service. These respondents collect information to support their core activities and then must synthesize information to develop abstracts in order to complete the EIA forms. This synthesis is a time-consuming process, which is a key contributing factor to the deterioration in the timely submission of data to EIA. For this task, EIA proposes to engage Federal and contractor staff to develop and implement improved methods of receiving reliable and timely data. Beginning in FY 2001, EIA estimates this project to take two-years to complete at $40 thousand for this year.

(4) Crude Oil Production System Redesign - This EIA information system is over ten-years old and needs to be reprogrammed in order to function within the current information technology base. EIA resources were significantly taxed to cope with poor and late data reporting and radical changes in price and production levels during 1998. This resulted in poorer oil production estimates, and the need for an unusual number of data revisions. Requested funding will be used by Federal and contractor staff to upgrade the system. The upgraded system will have the compatibility to interface with other EIA data systems, and provide the necessary flexibility, timeliness, and quality assurance to support the monthly and annual dissemination of oil production data at the State level. Beginning in FY 2001, EIA estimates the cost of this one-year project at $50 thousand.

(5) Update/Rewrite Oil and Gas Integrated Field File (OGIFF) System - EIA's OGIFF database is the premier U.S. tool for analyzing proved oil and gas reserves and ultimate recovery appreciation. The current system is over 10-years-old and is written in a data base language no longer supported. It is not cost effective to update the current system as the expertise is no longer available for this unsupported data base language. With the requested funding, EIA will engage Federal staff and contractors to rewrite the OGIFF system for operation on a contemporary SQL database. Starting in FY 2001, EIA estimates the cost of this one-year project at $130 thousand.

- Continued Development of Common Collection and Processing System (CCAPS) - Integrate Energy Surveys and Incorporating Data Collection.

EIA's is continuing the development and integration CCAPS survey data collection and processing. The goal is to significantly reduce data collection and processing costs, reduce software life-cycle costs, and to continually add value by improving the timeliness of energy information provided for EIA respondents and customers. To date, several coal and natural gas surveys have been transitioned into CCAPS. EIA plans to place these surveys in operation during the year 2000 survey cycle. During FY 2000, EIA will begin to transition the petroleum supply surveys. During FY 2001, EIA plans to complete the integration of the petroleum supply surveys into CCAPS, and begin work on the remaining EIA energy surveys' transition into the CCAPS data processing structure. In addition, EIA plans to start incorporating data collection into the CCAPS framework to enhance the efficient flow of energy data collection to processing. CCAPS will incorporate a variety of collection methods including Internet, mailed software (the successor to EIA's PEDRO), and mailed paper forms.

During FY 2001, EIA plans to start work on integrating a common data querying and extraction capability within CCAPS. With this capability, CCAPS will be able to calculate all the aggregates within and across surveys. CCAPS will also provide a flexible tool for developing drafts of modified or new tables being considered for dissemination. Once the development of CCAPS for survey data processing is complete, and in keeping with our Strategic Plan, it is EIA's plan to integrate an On-Line Analytical Processing (OLAP) capability to provide users easy access to the data. Initially, an OLAP system will be developed for EIA's Local Area Network (LAN) users, with the long-term goal of providing this capability to the public via the Internet. EIA estimates the cost in FY 2001 to pursue these CCAPS initiatives to be $500 thousand.

Efficiency Investments

EIA will continue to improve its base programs through investing in methods and integrating technologies that achieve efficiency gains. Over the past several years, EIA has invested in new, streamlined data systems, increased use of personal computers, enhanced local area networks, and upgraded servers and enterprise servers, to access, process, and disseminate information. EIA plans to continue these endeavors, with an increasing number of EIA products being disseminated only in electronic form. Other cost savings will occur through eliminating redundant practices, by continuously aligning our workforce of Federal and contractor staff to efficiently and effectively address EIA's evolving requirements. In addition, EIA will continue analyzing processes with the purpose of streamlining operations, reducing time requirements, retiring or replacing systems which are inefficient or no longer required, and consolidating program functions where efficiencies can be attained.

EIA Omnibus Procurement

With the purpose of improving EIA's contractor cost efficiency, the EIA Omnibus Procurement (EOP) was awarded in mid-December 1997. This action represents a fundamental change in the way EIA awards tasks. Prior to this initiative, EIA employed several contractors who were individually selected following a long competitive process. Tasks awarded to these contractors were on a cost-plus-fixed-fee basis. With a cost-plus-fixed-fee task, the actual cost of each task is not known until the work was completed, so the final costs of some cost-plus-fixed-fee tasks are higher than

expected. With the ability provided within the EOP to issue firm-fixed price tasks, EIA knows what a task will cost with far less potential for unexpected or unanticipated cost increases at the conclusion of the task.

The EOP award also supports EIA's Business Reengineering goals which promote continuous efficiency improvements. In addition, the EOP award supports the goals stated in the Federal Acquisition Streamlining Act (FASA) which promotes simplification of procurement and increased use of competition at the task level through the use of multi-award contracts. To pursue this contract efficiency initiative, EIA established a Procurement Planning Advisory Group. This group collaborated with the Department, the Office of Management and Budget, and the Small Business Administration, to investigate alternatives to improve EIA's task award cost effectiveness. The group's efforts resulted in the EOP.

The EOP is a multi-award contract with three functional areas: Information Management and Product Production, Energy Analysis and Forecasting, and Information Technology. With the EOP, small, 8(a), and small disadvantaged businesses having significant opportunities to contend for all competed task orders within their functional area. EIA started awarding task orders under the EOP in May 1998, with a goal of 10% being firm-fixed price task orders. For FY 1999, of the 143-task orders were awarded, 53% of the task orders are firm-fixed price.

With the EOP and competition at the task level, EIA is maximizing the opportunity to receive the best value for every tax dollar used to engage contractor support. In addition, the previous method of competing every individual contact was replaced with a more cost effective multi-award contract competition. As a forerunner in the Department of Energy headquarters in implementing a multi-award contract, EIA has lead the way for other parts of the Department considering this type of contracting to improve the efficiency and effective use of their contractor support.

STAFFING

In the Department of Energy's Workforce 21 Initiative, EIA's FY 2001 end-of-year Federal staffing level is 375 FTEs. EIA plans to rely on normal attrition and prioritized hiring to maintain Federal staffing level. With the revised Federal staff targets, and through the initiation of a staff replacement program, EIA will be able to address our projected deficits in industry expertise and leadership demographics.

For FY 2001, EIA's salary and benefit costs are estimated to be $35.130 million, or 47% of EIA's $75.0 million request. This estimate assumes an FY 2001 FTE level of 375, no reduction-in-force, OMB personnel cost projections, and a normal attrition rate.

EIA plans to continue the development of Federal staff capabilities to address EIA's future critical needs, and make economical and effective use of contractor support where appropriate. At requested resource levels, EIA estimates a reduction in use of contract support from a FY 1995 ratio of 1.0 Federal personnel to 1.2 contractor staff, to a 1.0 Federal personnel to 0.62 contractor staff. That is about a 50% reduction.

In conjunction with EIA's strategic planning process and workforce management endeavors, EIA will continually examine its staff skill mix and plans to assure future employee development and training needs are addressed. EIA will continue to accomplish its mission by continuously reassessing and realigning its portfolio of products and services, with an increasing reliance on Federal staffing, and the integration of evolving information management and communications technologies.

LINK TO DEPARTMENT STRATEGIC PLAN

As part of the Energy Resources Strategic Goal, DOE committed to "carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives." EIA is responsible for two action items to support this Departmental objective: (1) increasing the number of unique monthly users of EIA's Web Site, and (2) the dissemination of EIA's midterm forecasts as contained in the *Annual Energy Outlook*. Significant growth in the usage of EIA's Web Site is discussed in the section "Increasing Customer Usage." In FY 2001, EIA is planning to continue publishing the *Annual Energy Outlook*. These items are reflected in the DOE FY 2001 Annual Performance Plan as Item ER5-1.

PERFORMANCE RESULTS

EIA's major output is energy information. The purpose (outcome) of EIA's energy data collection, analysis and dissemination endeavors is to promote sound policymaking, efficient markets and public understanding. Because assessing the level of achievement of these ultimate outcomes is very difficult and costly, we approximate overall achievement of our mission by measuring customer satisfaction levels and product usage. EIA tracks product usage levels in many ways (number of Web site files downloads, number of publications mailed out, number of customers and the products they use, number of telephone inquiries, and number of media citations, etc.). EIA measures customer satisfaction through surveys and focus groups. Both customer satisfaction ratings and usage levels are significant. The results also show that while EIA is accomplishing our mission, has made improvements, and has a growing list of

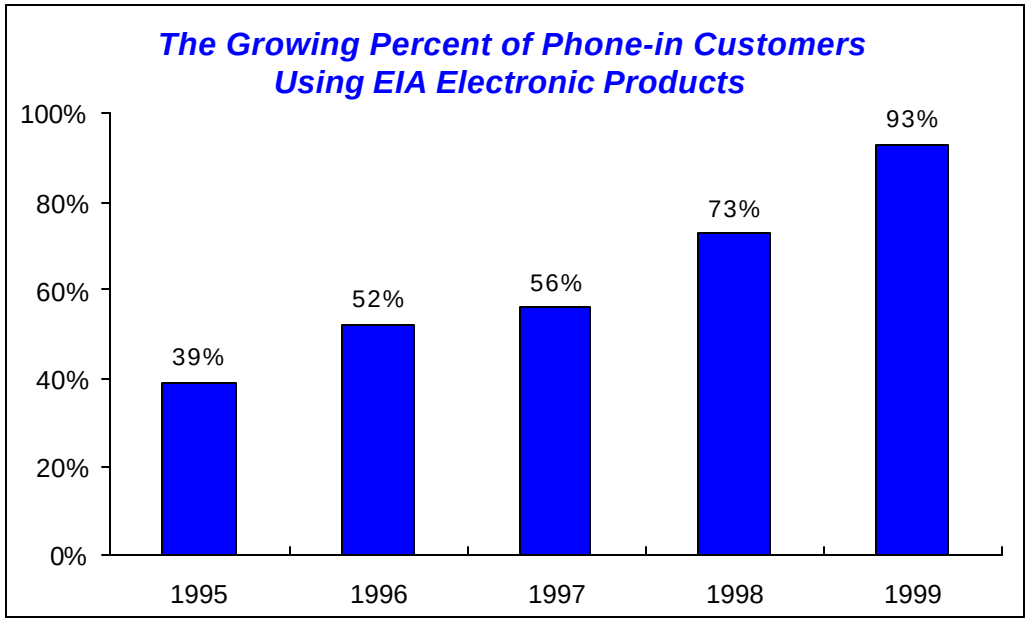

Figure 6

satisfied customers, there are still areas which can benefit from improvement. EIA's financial and market results indicated that in spite of overall reductions in both funding and staffing between FY 1995 and FY 1999, EIA has expanded our customer base and improved our products' attributes. Through large-scale electronic and media dissemination of our products, EIA has improved the availability of energy information while reducing printing and distribution costs. EIA will continue to focus on achieving higher levels of efficiency and effectiveness.

Customer Satisfaction and Survey Activities

EIA has conducted an annual survey of its telephone customers each year since FY 1995, establishing a continuing time series of performance results. EIA has also conducted surveys of users of its Web site, CD-ROM, and other energy data dissemination methods, and more than 2,000 recipients of EIA printed publications. In all of these surveys, customers are asked to rate their overall satisfaction, and rate EIA on five attributes of customer service (courtesy, promptness, accessibility, knowledge of the material, and ability to understand customer needs) and on five attributes of product quality (availability, relevance, accuracy, comprehensiveness, and timeliness).

In each year since FY 1995, at least 95% of EIA's telephone customers reported they were either satisfied or very satisfied with EIA's overall customer service. In addition, the number of customers using EIA electronic products has increased drastically (see Figure 6).

In terms of the EIA products' quality, telephone customer satisfaction ratings overall are also high (86% to 94%) over the past five years. Furthermore, a one-time question in 1997 was added (at the request of DOE's Office of Quality Management) which showed that 87% of telephone customers trusted EIA to provide a quality product to a "great extent" or "completely." However, among the five quality attributes, timeliness has historically had lower satisfaction scores. EIA has specifically targeted timeliness (which includes decreasing the time between when data are collected and when they are ready for dissemination, and increasing the speed of dissemination) as a key area of improvement. A new Web site customer survey to be fielded early in FY 2000 will follow-up with our customers on product timeliness improvement.

EIA collects energy data from respondents who are required to fill out survey forms. The more intuitive and understandable the forms, the higher quality the data. In 1998, EIA initiated three projects to redesign specific survey forms, one using focus groups and two using a technique called cognitive interviewing. This process involves respondents completing a survey with an interviewer while "thinking out loud," so the interviewer can see how they interact with the questionnaire and what meanings they get from terms and instructions. (Prior to 1998, EIA relied heavily on post-collection techniques, such as error checks and periodic expert reviews.) In June 1998, EIA used cognitive interviewing to test a redesign of the Manufacturing Energy Consumption Survey, prior to the 1999 data collection cycle. The revised version is longer but has a more intuitive design, and instructions printed throughout the survey directly in places where respondents need to read them (rather than in a separate booklet). In redesigning this survey, EIA conducted cognitive interviews at seven local manufacturing establishments, then revised the survey and pretested it. Respondents, who agreed to serve as pretest subjects, reported the revisions improved the survey design, the new format was easier to follow, and the additional length of the survey was not a concern.

EIA staff was trained in conducting cognitive interviews so these techniques can be used on other EIA data collections. In the near term, EIA plans to employ cognitive interviewing as a part of the information collection redesign efforts in the natural gas area. Building on these successes, EIA plans to make use of focus groups and cognitive interviewing as key processes in revamping energy surveys.

Increasing Customer Usage

EIA has engaged in an aggressive program to expand the availability of electronic information, upgrade energy data dissemination, and enhance coverage of energy information issues in the news media. This increased use of electronic technology (Internet, CD-ROM, etc.) for energy data dissemination has led to an explosive growth in the number of customers for our data, as well as increased the breadth of information distributed. For example, the growth in monthly users of EIA Web site is remarkable (see Figure 7 - note numbers of monthly users do not include EIA employees accessing the site). Rapid growth like that seen in the use of EIA's Web site access is evidenced in Web site file access. Of note, during 1997, EIA set a goal to increase the average number of unique monthly users of its web site by 20% annually, from a baseline of 37,000 users sessions. Between

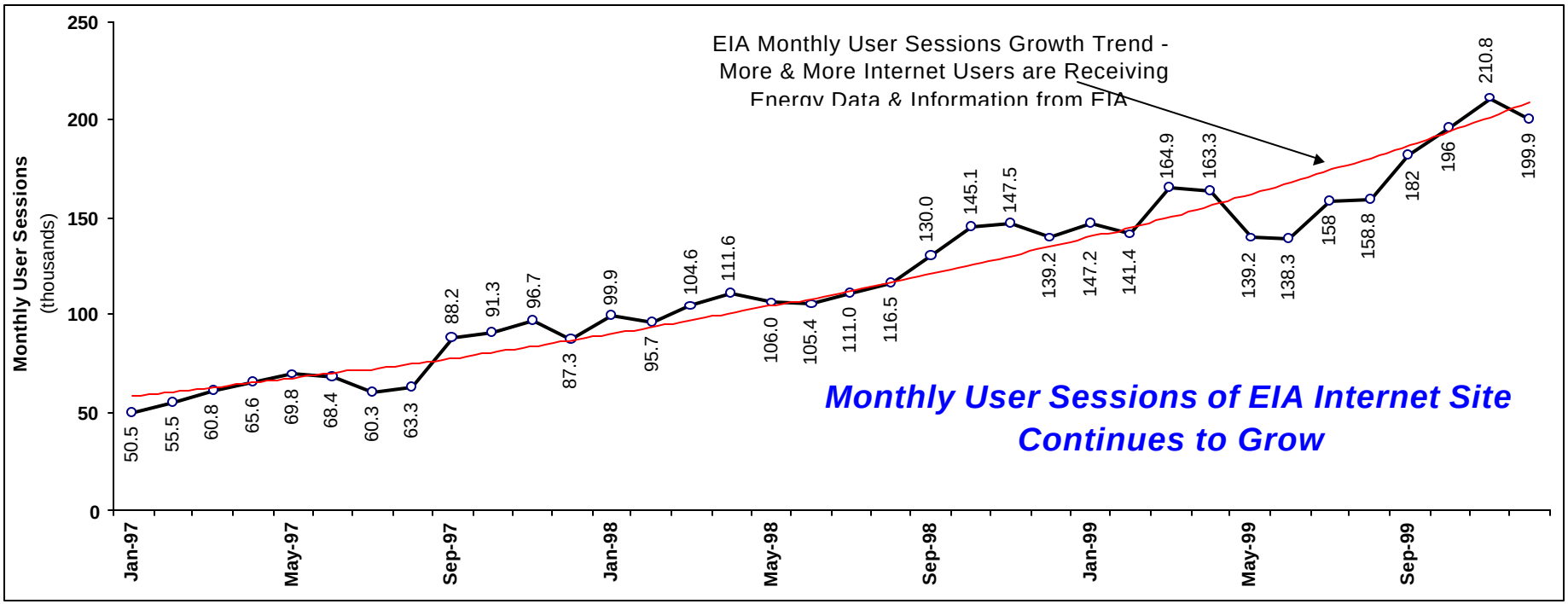

Figure 7

1996 to 1997 the growth in usage was 180%. By the end of 1997, EIA exceeded the goal with an average of 71,500 user sessions. By the end of 1998, EIA averaged 87,000 user sessions, again exceeding the goal. For 1999, EIA averaged 163,600 monthly user sessions, an increase of more than 64.7% when compared to the 1998 average monthly usage level. For December 1999 EIA was witnessing about 200,000 user sessions. For 1999, information downloaded from the EIA Web site averaged 94 gigabytes per month, or about 1.13 terabytes of energy information for the year. For December 1999, 1.4 million files were downloaded. This represents a 76% increase when compared to December 1998.

One result of the increase in the electronic availability of our information has been a dramatic increase in the number of customers contacting the National Energy Information Center for on-line support. For example, e-mail traffic is up nearly 114% between 1998 and 1999. Another result of our expanded use of electronic dissemination is a 35% reduction in the number of paper publications and a 50% reduction in publication printing costs since 1994, which results in avoiding more than $500,000 in expenditures per year.

EIA has dramatically increased the distribution of its information by becoming the dependable source of objective energy information for the news media. This has enabled our energy data to be widely use by the general public with minimal cost to the agency (Figure 8). In addition to the steady growth in media use of EIA information, public concern about price volatility in the gasoline and heating oil markets led to the increases in media citations in the spring of 1996, the winter of 1997, and the fall and winter of 1998-1999.

Another example of outcomes and impact, is the number of copies of EIA's recent brochure "Why Do Natural Gas Prices Fluctuate So Much?" being requested by natural gas companies for distribution to their customers. These natural gas companies see this brochure as an excellent way to explain to their customers why natural gas prices fluctuate. In addition, natural gas companies can note that this information was prepared by a non-biased source.

Perhaps the area most difficult to quantify is the impact of EIA's data on the policy development process. EIA has substantial evidence that our information and analyses are sought prior to legislative action. Most recently, as the restructuring of the electric power industry has moved to the front of the energy debate, EIA's briefing on how the industry works have been presented to more than 50 Congressional staff, principally from the Senate Energy and Natural Resources Committee. EIA's Administrator was requested to testify before the Energy and Power Subcommittee of the House of Representatives on future competitive electricity prices. EIA's brochure "The Restructuring of the Electric Power Industry - A Capsule of Issues and Events" which clarifies the complex issues involved, is one of the most popular files on our Web site with more than 2,000 printed copies distributed. EIA was requested by the Chairman and ranking minority member of the House Science Committee to prepare a study on the cost and economic impacts of proposed reductions in greenhouse gas emissions, in accordance with the Kyoto agreement. EIA believes the inclusion of our policy-neutral input on these major issues will help result in informed debate and sound policy decisions.

Of special note, EIA's Web site has won several awards for quality and content. Most recently, EIA's Web site was selected by *Government Executive* magazine as one of the best sixteen Federal Web sites for 1999, from 120 nominated web sites. In the announcement of the winners, *Government Executive* stated, "EIA is a tiny agency, so the comprehensiveness of its site - and its ease of navigation - amazed the judges. Everyone

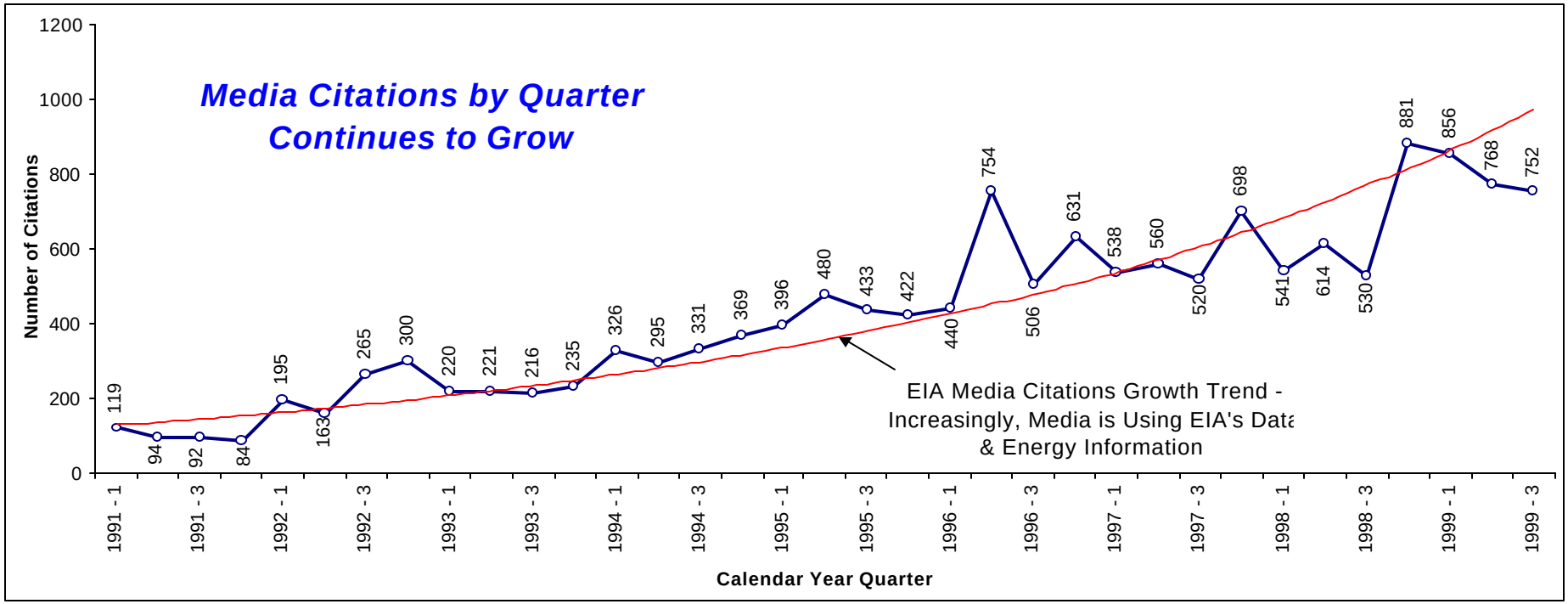

Figure 9

who works in the energy industry is well-served by this site." EIA also was commended for making full use of the power of e-mail by featuring e-mail notification lists for more than 30 different energy subjects.

In summary, EIA is serving a growing customer base, and achieving high levels of customer satisfaction with our energy data, analyses, forecasts, and timeliness. During FY 2001, EIA expects to receive 3 million inquires for energy information. To meet future customer requirements, EIA will need to leverage evolving information processing and communications technologies, explore and develop innovations to improve our capabilities, and align our resources to effectively meet the energy information needs of Government, industry, and the public.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(dollars in thousands)
PROGRAM FUNDING PROFILE
National Energy Information System

Activity	FY 1999 Enacted	FY 2000 Enacted [1]	FY 2001 Base	FY 2001 Request	Program Change Request vs. Base Dollar	Program Change Request vs. Base Percent
Oil and Gas						
Operating Expenses	$ 17,555	$ 18,197	$ 18,197	$ 19,249	$ 1,052	5.8%
Coal, Nuclear, Electric, and Alternate Fuels						
Operating Expenses	$ 9,979	$ 10,810	$ 10,810	$ 10,600	$ -210	-1.9%
Energy Markets and End Use						
Operating Expenses	$ 9,067	$ 9,845	$ 9,845	$ 10,355	$ 510	5.2%
Integrated Analysis and Forecasting						
Operating Expenses	$ 8,366	$ 9,112	$ 9,112	$ 9,122	$ 10	0.1%
Information Technology						
Operating Expenses	$ 9,795	$ 9,014	$ 9,014	$ 9,629	$ 615	6.8%
National Energy Information Center						
Operating Expenses	$ 2,199	$ 2,213	$ 2,213	$ 2,314	$ 101	4.6%
Statistics and Methods						
Operating Expenses	$ 2,255	$ 2,399	$ 2,399	$ 2,408	$ 9	0.4%
Resource Management						
Operating Expenses	$ 11,284	$ 10,778	$ 10,778	$ 11,323	$ 545	5.1%
SUBTOTAL	$ 70,500	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%
Use of Prior Year Balances [2]	- 315	- -	- -	- -	- -	- -
TOTAL	$ 70,185	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION

Proposed Appropriation Language

For necessary expenses in carrying out the activities of the Energy Information Administration, [$72,644,000] *$75,000,000*, to remain available until expended.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(Tabular dollars in thousands, Narrative in whole dollars)

PROGRAM MISSION

On line and off the shelf, the Energy Information Administration (EIA) is the first place to go for the last word in energy information. The EIA is a leader in providing high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding. As part of EIA's strategic plan, the following goals have been set:

- Assure products and services are relevant to the needs of customers
- Assure data, analyses, and forecasts are of the highest quality
- Provide customers fast and easy access to public energy information
- As a performance driven organization, conduct business in an efficient and cost-effective manner
- Work together to achieve the full potential of a diverse workforce

As an independent statistical/analytical agency, EIA has two principal roles. First, EIA's primary responsibility is to conduct the functions required by statute. These functions include the development and maintenance of a comprehensive energy database, and the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors. EIA also prepares specific reports which are required by law. Second, EIA responds to inquiries for energy information. The primary customers of EIA services are public policymakers in the Department of Energy and the Congress. Customers include other agencies in the Executive branch and independent agencies of the Federal Government, State and local governments, the energy industry, educational institutions, the news media, and the public. To preserve credibility with this broad client base, EIA maintains its independence from policy development. Consequently, EIA's role is to provide data and perform analyses. EIA does not develop or take policy positions. EIA has analyzed, and will continue to analyze, policy proposals generated elsewhere. EIA's strategy is to make its broad mix of products and services available to its customers through the continued use of publications, and an expansion of electronic dissemination via the EIA web site and CD-ROM.

REQUEST

EIA's FY 2001 Congressional budget request is $75.0 million. This request is $2.4 million over our FY 2000 appropriation of $72.6 million and 11.4% below the FY 1995 appropriation of $84.6 million (or 18.8% below after adjusting for inflation). As can be seen in Figure 1, EIA's budget has undergone a dramatic decrease over the past two decades, resulting in a reduction of 57.5% (adjusted for inflation) since FY 1980. In FY 2001, EIA intends to continue our base program, enhance international analysis capabilities, begin work associated with assessing the accuracy and reliability of several energy data systems, continuing overhauling several survey frames and data systems, and seek further efficiency gains through the use of information processing and communications technologies.

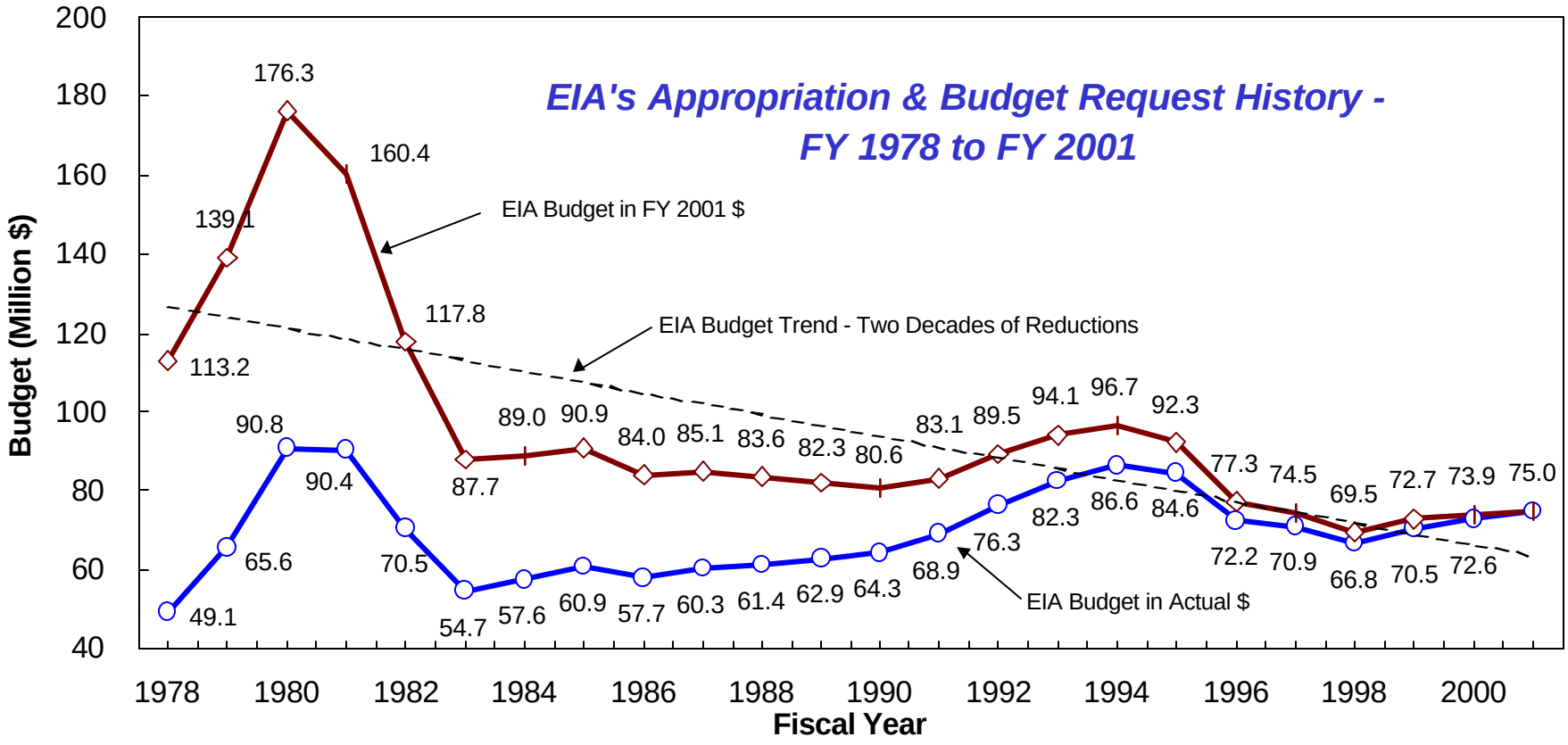

Figure 1

EIA continues to stand alone as the only statistical agency to absorb significant budget reductions since FY 1994 (see Figure 2). As one of the Federal Statistical Agencies, EIA has one of the smallest annual budgets, accounting for only 1.8% of the total FY 2000 U.S. statistical agencies budget requests (see Figure 3).

EIA has also absorbed significant Federal staff reductions. The work formerly done by these employees was not shifted to contractors, as EIA absorbed even greater reductions in contractor staff levels. Since 1995, EIA's total workforce, including both Federal and contractor employees, has decreased from approximately 1000 personnel to approximately 674 personnel in 1999, a 33% reduction.

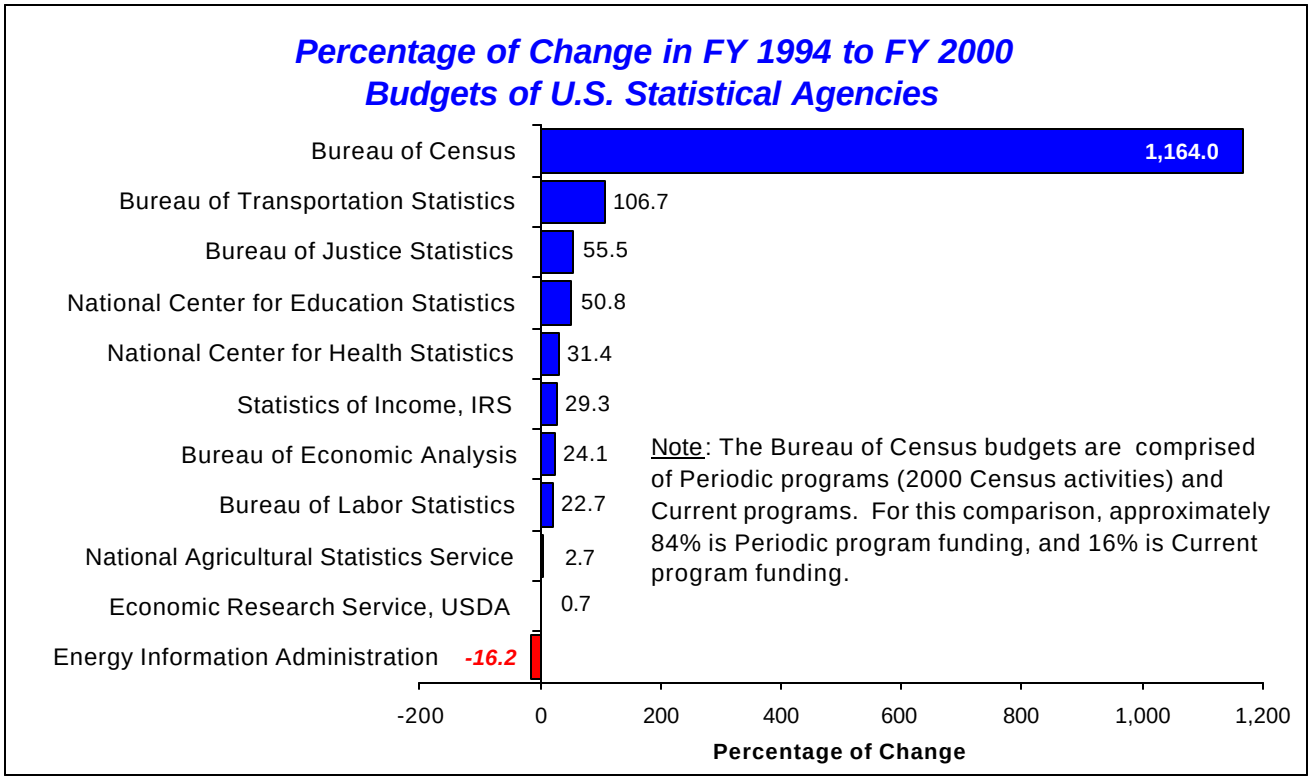

Figure 2

Base Program

In FY 2001, EIA's base program will consist of the maintenance of a comprehensive energy database, the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors, the maintenance of the National Energy Modeling System for midterm energy markets analysis and forecasting, the maintenance of the Short-Term Integrated Forecasting System for near-term energy market analysis and forecasting, customer forums and surveys to maintain an up-to-date product and service mix, and the continued expansion of electronic information dissemination via the EIA Web site and CD-ROM.

Program Investments

For FY 2001, EIA will continue to focus on: (1) The overhaul of EIA consumption surveys to update these 20-year-old surveys, (2) The overhaul of the natural gas and electricity surveys and data systems to recognize and accommodate the changes in the natural gas and electricity industries brought on by deregulation and restructuring. (3) Enhancement of EIA's international analysis capabilities in order to assess carbon mitigation, permit trading, and other global climate change issues. (4) Reversing the deterioration in data quality and accuracy in several energy areas.

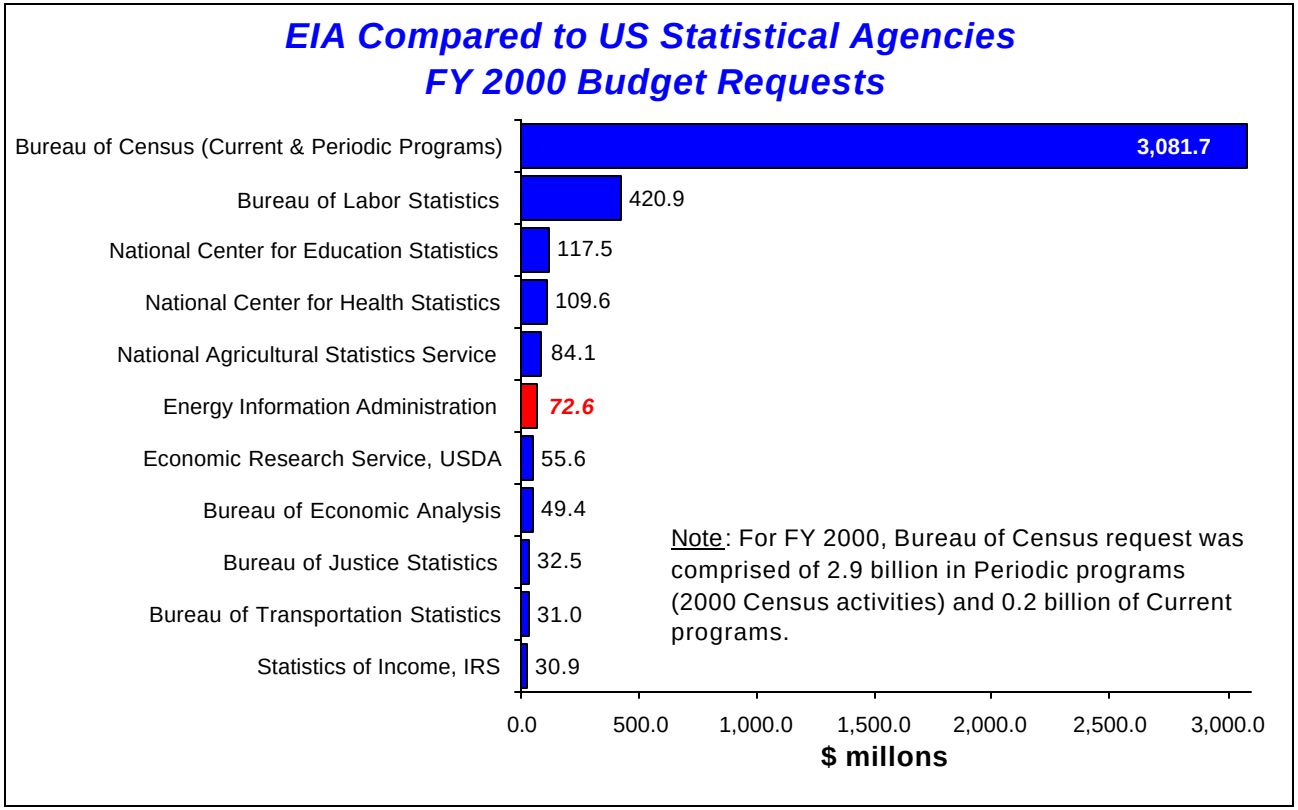

Figure 3

Initiatives

! Continue Overhaul of the Energy Consumption Surveys - Reconstructing a 20-year-old design.

EIA's energy consumption surveys are the Nation's most comprehensive source of data on energy use in major sectors of the United States economy. These surveys also include the characteristics of energy users. EIA presently has surveys in place covering 3 major sectors: households, commercial buildings, and manufacturers. The data from these surveys enlighten public policy debate on energy programs and issues, describe the potential markets for technology and energy efficiency improvements, and contribute to public understanding of energy use and its environmental impacts.

For several reasons, the consumption surveys will become more visible and critical over the next several years. Two principal reasons are: (1) The debate on greenhouse gas emissions and global warming potential will cause the United States, as well as other countries, to assess and understand the impact from major sources of emissions generated by human activity. (2) With the restructuring and deregulation of the electric and natural gas

industries, energy use and price data, especially at the consumers' level, are much more difficult to obtain from suppliers. This type of information will be especially useful to State governments, who are currently working with EIA and increasingly rely on EIA data to understand and effectively manage the current and emerging effects of energy industry restructuring's impact on energy consumers in their State.

In FY 2000, EIA initiated a redesign of the consumption surveys. This redesign initiative is critical because EIA's energy consumption surveys will have operated for more than 20 years based on the same statistical frame design. (Frame design is the complete population from which a statistically representative sample is drawn). This is far beyond the usual 10-year life-cycle tied to the census, but funding was not provided to update the surveys following the 1990 census. (Common statistical practice with complex area samples, especially those employing area-based designs, is to redesign after each decennial census to realign the coverage of the survey in order to reflect the current population demographics.) The sequential updating methodology used over the last 15+ years is a less than optimal method as compared to a decennial redesign in attempting to keep the current consumption surveys as up-to-date as possible. However, the performance and reliability measures of EIA's consumption surveys started to indicate deterioration. For example, commercial building square footage estimates from the 1995 Commercial Building Energy Consumption Survey declined from the level measured by the previous survey (Figure 4), a result at odds with all economic indicators of commercial activity.

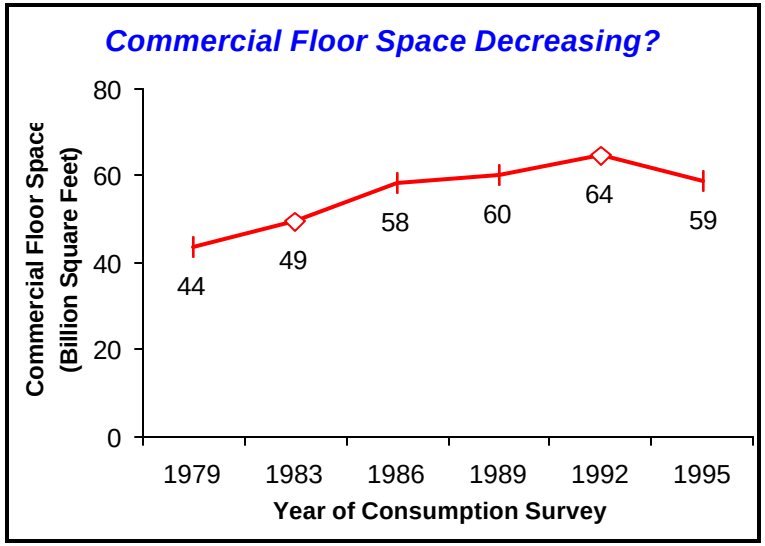

Figure 4

Funds will be used to continue support of Federal and contractor staff engaged in updating the survey frames and sampling. The redesign will realign the consumption surveys' coverage with the distribution of residential and commercial buildings populations as indicated by the 2000 census. Started in FY 2000, this multi-year effort within Energy Markets and End Use is expected to continue through FY 2001 and for three additional years, after which the updated sample design, survey frames, and data systems will be fully implemented. EIA estimates the cost for completing the consumption surveys redesign will be $600 thousand per year.

- Maintain Quality of Energy Consumption Data

Because of the increasing importance of consumer-based data, it is critical to maintain the quality of the data from these surveys. Starting with FY 2001, additional resources are needed to support the operation of these surveys. A permanent addition of $550 thousand in Energy Markets and End Use funding is needed to offset unavoidable increases in survey costs due to (1) the tight labor market for survey field workers; (2) the increasing amount of work needed to keep survey response rates high in the current cultural climate, with respondents increasingly more difficult to reach and more resistant to completing surveys; and (3) the need for expanded and more complex energy consumption and expenditures data collection procedures due to the more complex energy supply structure resulting from the natural gas and electric industry restructuring. Over the past several years, ongoing requirements for EIA to fund annually increasing survey costs from a decreasing budget have eroded EIA's capability to continue operating the three consumption surveys in a way that ensures high-quality data, and have required EIA to conduct these surveys once every four years.

If a permanent increase in EIA's operational base is not provided in FY 2001, EIA will need to choose one or more courses of action:

(1) Eliminate the personal interviews, changing to telephone or mail surveys and/or lengthen the time between surveys to 5 or more years. This course will increase levels of non-response, reduce callback efforts to convert non-respondents, and reduce editing and data cleanup activity. All of these outcomes will degrade the quality and integrity of the energy consumption data.

(2) Discontinue one of the surveys in order to maintain the quality of operations, and the resulting data, for the other two. This results in the loss of information in one of the consumption sectors.

- Continue Overhaul of the Electricity Surveys and Data Systems - Capturing Changes in a Restructured Industry.

In FY 1999, EIA initiated a multi-year effort to overhaul the surveys used to gather information from this nation’s restructuring of electricity generation and distribution. All of the EIA areas associated with electricity data collection, analysis, and reporting are undergoing significant revision and overhaul to reflect this evolving competitive industry. EIA will continue to make use of Federal and contractor staff to complete revision of the forms used to collect data, to develop new survey forms to reflect the unbundling of services, develop and implement new computer systems to process the information, and develop new data disclosure methods to protect the confidentiality of proprietary information. EIA estimates the FY 2001 and next year’s costs for the overhaul of the electricity surveys to be $1.0 million each year. To date EIA is on schedule with this effort, and plans to complete this endeavor in FY 2002 with the full implementation of the overhauled electricity data collection and reporting systems.

! Overhauls of Surveys and Data Systems Are Continuing in Order to Reflect Changes in the Restructured Natural Gas Industry.

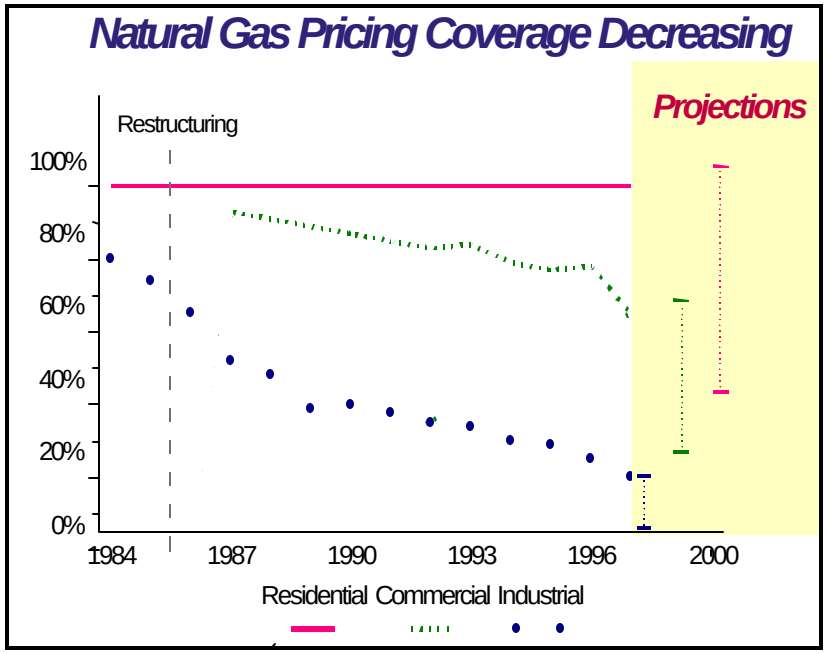

Figure 5

EIA's ability to provide data and information on the natural gas industry has been severely challenged by changes in the regulatory environment and corresponding industry restructuring. In FY 1998 for example, industrial price information for only 15% of the gas used by industrial customers was captured by EIA surveys, down from 75% coverage in FY 1984 (see Figure 5). Furthermore, coverage in the commercial areas dropped from more than 90% in FY 1987 to about 65% in FY 1998. With a move toward more competition at the retail level for residential and small commercial customers, coverage of the prices paid could be substantially reduced from the nearly 100% level of coverage we currently have. In addition, there are major segments of activity relating to prices and volumes for which no information is collected by EIA, such as the cost of underground storage, the cost of transportation, and price and physical transactions at market centers and market hubs.

Restructuring of the electric industry will also effect the information available on prices paid by electric generators for natural gas. Since natural gas is usually the swing fuel in electric generation, information on these prices is essential in understanding the fuel decisions made by electric generator operators and the subsequent impact on electricity prices. With the requested funding, EIA will continue to employ staff and contractors to progress on a three-phase plan to overhaul the natural gas surveys and data systems. The three phases are: (1) collect detailed information on the evolving structure and operation of the natural gas industry identifying critical data needs and sources; (2) develop and field test natural gas surveys and data systems; and (3) implement the overhauled natural gas survey and data systems. This multi-year overhaul of the natural gas data collection and data systems will continue for one more year when the updated systems are fully implemented. For FY 2001, EIA estimates the cost to continue the overhaul of the natural gas surveys and data systems to be $800K.

Starting with FY 2001, EIA is requesting a permanent increase of $175 thousand to provide the funding needed to address natural gas industry frames' (the universe of potential respondents) maintenance. With changes in the natural gas industry, maintaining frames for the existing populations has become increasingly difficult. This difficulty results from the new corporate entities being formed to market natural gas, as well as merger and consolidation activity in the industry. In addition, corporate downsizing and staff turnover has also increased the effort required by EIA to track changes in the industry. EIA Federal and contractor staff resources are not adequate to monitor the changing structure and rapidly changing market participants. To address these deficiencies, EIA needs to institute a higher level of frames' maintenance than was needed when the industry was regulated. With the requested increase, EIA would have the resources needed to: (1) monitor mergers, acquisitions, corporate reorganizations, and the

formation of new companies in the natural gas industry, (2) continually assess the impact of those corporate changes on reporting requirements, and (3) continually assess the impact of these ongoing corporate and industry changes on EIA's operation and processing of monthly and annual surveys.

! Continue Enhancement of International Energy Analysis Capabilities.

The requests for EIA to conduct carbon analysis and produce projections on the international level continue to increase. Currently, EIA's international modeling capability is unable to assess the economic consequences on the United States of energy-related compliance options, commitments, and actions of foreign countries. EIA does not have the policy analysis capabilities, or the capability to represent emissions trading between countries and/or regions. With the requested funding, EIA will continue to engage Federal staff and contractors in the development and/or acquisition of an international modeling capability to assess energy policies, technological change, and international carbon permit trading schemes. Started during FY 1999, the goal of this multi-year project is to acquire an international modeling capability, develop a framework for the modeling of international permit trading schemes using this capability, and ensure consistency with the U.S. projections from the National Energy Modeling System (NEMS). EIA plans to complete this initiative following two additional years of effort, at which time EIA will be in the position to provide reliable analysis and projections on international policies.

In FY 2001, EIA will develop a preliminary version of the model, System for Analysis of Global Energy Markets, based on the project requirements as defined in EIA's Report: "Design and Development Plan for the System for Analysis of Global Energy Markets". Also, in FY 2001, EIA will use this preliminary model to produce the forecasts for the International Energy Outlook 2001. The model methodologies will be enhanced over the next two fiscal years to represent the critical areas of regulation, technological improvement, and international carbon permit trading.

! Confront and Correct Critical Petroleum and Natural Gas Data Quality Issues.

(1) Weekly/Monthly Petroleum Supply Data Quality Control - The accuracy of petroleum supply and demand data is deteriorating. The loss of accuracy is the result of a long, slow deterioration in the quality of the data reported to the EIA that cannot be fully analyzed and corrected with the current level of resources. With the large volume of mergers, acquisitions, joint ventures, and company asset sales, EIA has found it increasingly difficult to track and monitor the changes in the industry while maintaining its petroleum frames (that is, up-to-date lists of potential respondents). EIA will engage Federal and contract staff to increase our efforts to identify the causes of the data quality deterioration, and implement processes to improve and maintain the high data quality needed to provide an accurate understanding of the petroleum industry and petroleum markets. Beginning in FY 2001, EIA estimates this project will take two years to complete.

(2) Petroleum Form Changes to Maintain Relevance - As environmental regulatory changes mandated under the Clean Air Act Amendments of 1990 are entering Tier II, new standards for low sulfur gasoline, national versus regional standards, low sulfur diesel, and other diesel specification changes will be implemented. In addition, environmental concerns over the use of ethers in gasoline, particularly MTBE, are leading to discussions of a ban on this significant gasoline component. These changes will necessitate changes in EIA's survey forms and reporting system as early as 2002. Starting in

FY 2001, the additional funding will support Federal and contractor staff to: (1) conduct analyses on the impact of these regulatory changes, and (2) modify survey reporting forms. Beginning in FY 2001, EIA projects this project will take two-years to complete.

The quality issues cited above are critical to the continuation of EIA's ability to provide accurate and timely petroleum information. If additional funding for these short-term initiatives and ongoing work is not made available, EIA proposes to terminate the operation of two State-level data surveys: the EIA-821, "Annual Fuel Oil and Kerosene Sales Report," and the EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption," and two crude surveys: the EIA-182, "Domestic Crude Oil First Purchase Report," and the EIA-856, "Monthly Foreign Crude Oil Acquisition Report." The resources needed to operate these surveys, would be used to begin addressing the required upgrades in the previously cited oil survey data and information processing systems.

(3) Quality & Timeliness of Natural Gas Production Data - EIA continues to witness a deterioration in the timeliness of responses to natural gas surveys. Although changes underway in survey design and approach should address most of these issues, in the interim, EIA has increasingly relied on imputation and early estimation procedures in order to release these data in a timely manner. The principal impediment to improved timeliness relates to the sources of the information, which relies on State agencies and the Minerals Management Service. These respondents collect information to support their core activities and then must synthesize information to develop abstracts in order to complete the EIA forms. This synthesis is a time-consuming process, which is a key contributing factor to the deterioration in the timely submission of data to EIA. For this task, EIA proposes to engage Federal and contractor staff to develop and implement improved methods of receiving reliable and timely data. Beginning in FY 2001, EIA estimates this project to take two-years to complete at $40 thousand for this year.

(4) Crude Oil Production System Redesign - This EIA information system is over ten-years old and needs to be reprogrammed in order to function within the current information technology base. EIA resources were significantly taxed to cope with poor and late data reporting and radical changes in price and production levels during 1998. This resulted in poorer oil production estimates, and the need for an unusual number of data revisions. Requested funding will be used by Federal and contractor staff to upgrade the system. The upgraded system will have the compatibility to interface with other EIA data systems, and provide the necessary flexibility, timeliness, and quality assurance to support the monthly and annual dissemination of oil production data at the State level. Beginning in FY 2001, EIA estimates the cost of this one-year project at $50 thousand.

(5) Update/Rewrite Oil and Gas Integrated Field File (OGIFF) System - EIA's OGIFF database is the premier U.S. tool for analyzing proved oil and gas reserves and ultimate recovery appreciation. The current system is over 10-years-old and is written in a data base language no longer supported. It is not cost effective to update the current system as the expertise is no longer available for this unsupported data base language. With the requested funding, EIA will engage Federal staff and contractors to rewrite the OGIFF system for operation on a contemporary SQL database. Starting in FY 2001, EIA estimates the cost of this one-year project at $130 thousand.

- Continued Development of Common Collection and Processing System (CCAPS) - Integrate Energy Surveys and Incorporating Data Collection.

EIA's is continuing the development and integration CCAPS survey data collection and processing. The goal is to significantly reduce data collection and processing costs, reduce software life-cycle costs, and to continually add value by improving the timeliness of energy information provided for EIA respondents and customers. To date, several coal and natural gas surveys have been transitioned into CCAPS. EIA plans to place these surveys in operation during the year 2000 survey cycle. During FY 2000, EIA will begin to transition the petroleum supply surveys. During FY 2001, EIA plans to complete the integration of the petroleum supply surveys into CCAPS, and begin work on the remaining EIA energy surveys' transition into the CCAPS data processing structure. In addition, EIA plans to start incorporating data collection into the CCAPS framework to enhance the efficient flow of energy data collection to processing. CCAPS will incorporate a variety of collection methods including Internet, mailed software (the successor to EIA's PEDRO), and mailed paper forms.

During FY 2001, EIA plans to start work on integrating a common data querying and extraction capability within CCAPS. With this capability, CCAPS will be able to calculate all the aggregates within and across surveys. CCAPS will also provide a flexible tool for developing drafts of modified or new tables being considered for dissemination. Once the development of CCAPS for survey data processing is complete, and in keeping with our Strategic Plan, it is EIA's plan to integrate an On-Line Analytical Processing (OLAP) capability to provide users easy access to the data. Initially, an OLAP system will be developed for EIA's Local Area Network (LAN) users, with the long-term goal of providing this capability to the public via the Internet. EIA estimates the cost in FY 2001 to pursue these CCAPS initiatives to be $500 thousand.

Efficiency Investments

EIA will continue to improve its base programs through investing in methods and integrating technologies that achieve efficiency gains. Over the past several years, EIA has invested in new, streamlined data systems, increased use of personal computers, enhanced local area networks, and upgraded servers and enterprise servers, to access, process, and disseminate information. EIA plans to continue these endeavors, with an increasing number of EIA products being disseminated only in electronic form. Other cost savings will occur through eliminating redundant practices, by continuously aligning our workforce of Federal and contractor staff to efficiently and effectively address EIA's evolving requirements. In addition, EIA will continue analyzing processes with the purpose of streamlining operations, reducing time requirements, retiring or replacing systems which are inefficient or no longer required, and consolidating program functions where efficiencies can be attained.

EIA Omnibus Procurement

With the purpose of improving EIA's contractor cost efficiency, the EIA Omnibus Procurement (EOP) was awarded in mid-December 1997. This action represents a fundamental change in the way EIA awards tasks. Prior to this initiative, EIA employed several contractors who were individually selected following a long competitive process. Tasks awarded to these contractors were on a cost-plus-fixed-fee basis. With a cost-plus-fixed-fee task, the actual cost of each task is not known until the work was completed, so the final costs of some cost-plus-fixed-fee tasks are higher than

expected. With the ability provided within the EOP to issue firm-fixed price tasks, EIA knows what a task will cost with far less potential for unexpected or unanticipated cost increases at the conclusion of the task.

The EOP award also supports EIA's Business Reengineering goals which promote continuous efficiency improvements. In addition, the EOP award supports the goals stated in the Federal Acquisition Streamlining Act (FASA) which promotes simplification of procurement and increased use of competition at the task level through the use of multi-award contracts. To pursue this contract efficiency initiative, EIA established a Procurement Planning Advisory Group. This group collaborated with the Department, the Office of Management and Budget, and the Small Business Administration, to investigate alternatives to improve EIA's task award cost effectiveness. The group's efforts resulted in the EOP.

The EOP is a multi-award contract with three functional areas: Information Management and Product Production, Energy Analysis and Forecasting, and Information Technology. With the EOP, small, 8(a), and small disadvantaged businesses having significant opportunities to contend for all competed task orders within their functional area. EIA started awarding task orders under the EOP in May 1998, with a goal of 10% being firm-fixed price task orders. For FY 1999, of the 143-task orders were awarded, 53% of the task orders are firm-fixed price.

With the EOP and competition at the task level, EIA is maximizing the opportunity to receive the best value for every tax dollar used to engage contractor support. In addition, the previous method of competing every individual contact was replaced with a more cost effective multi-award contract competition. As a forerunner in the Department of Energy headquarters in implementing a multi-award contract, EIA has lead the way for other parts of the Department considering this type of contracting to improve the efficiency and effective use of their contractor support.

STAFFING

In the Department of Energy's Workforce 21 Initiative, EIA's FY 2001 end-of-year Federal staffing level is 375 FTEs. EIA plans to rely on normal attrition and prioritized hiring to maintain Federal staffing level. With the revised Federal staff targets, and through the initiation of a staff replacement program, EIA will be able to address our projected deficits in industry expertise and leadership demographics.

For FY 2001, EIA's salary and benefit costs are estimated to be $35.130 million, or 47% of EIA's $75.0 million request. This estimate assumes an FY 2001 FTE level of 375, no reduction-in-force, OMB personnel cost projections, and a normal attrition rate.

EIA plans to continue the development of Federal staff capabilities to address EIA's future critical needs, and make economical and effective use of contractor support where appropriate. At requested resource levels, EIA estimates a reduction in use of contract support from a FY 1995 ratio of 1.0 Federal personnel to 1.2 contractor staff, to a 1.0 Federal personnel to 0.62 contractor staff. That is about a 50% reduction.

In conjunction with EIA's strategic planning process and workforce management endeavors, EIA will continually examine its staff skill mix and plans to assure future employee development and training needs are addressed. EIA will continue to accomplish its mission by continuously reassessing and realigning its portfolio of products and services, with an increasing reliance on Federal staffing, and the integration of evolving information management and communications technologies.

LINK TO DEPARTMENT STRATEGIC PLAN

As part of the Energy Resources Strategic Goal, DOE committed to "carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives." EIA is responsible for two action items to support this Departmental objective: (1) increasing the number of unique monthly users of EIA's Web Site, and (2) the dissemination of EIA's midterm forecasts as contained in the *Annual Energy Outlook*. Significant growth in the usage of EIA's Web Site is discussed in the section "Increasing Customer Usage." In FY 2001, EIA is planning to continue publishing the *Annual Energy Outlook*. These items are reflected in the DOE FY 2001 Annual Performance Plan as Item ER5-1.

PERFORMANCE RESULTS

EIA's major output is energy information. The purpose (outcome) of EIA's energy data collection, analysis and dissemination endeavors is to promote sound policymaking, efficient markets and public understanding. Because assessing the level of achievement of these ultimate outcomes is very difficult and costly, we approximate overall achievement of our mission by measuring customer satisfaction levels and product usage. EIA tracks product usage levels in many ways (number of Web site files downloads, number of publications mailed out, number of customers and the products they use, number of telephone inquiries, and number of media citations, etc.). EIA measures customer satisfaction through surveys and focus groups. Both customer satisfaction ratings and usage levels are significant. The results also show that while EIA is accomplishing our mission, has made improvements, and has a growing list of

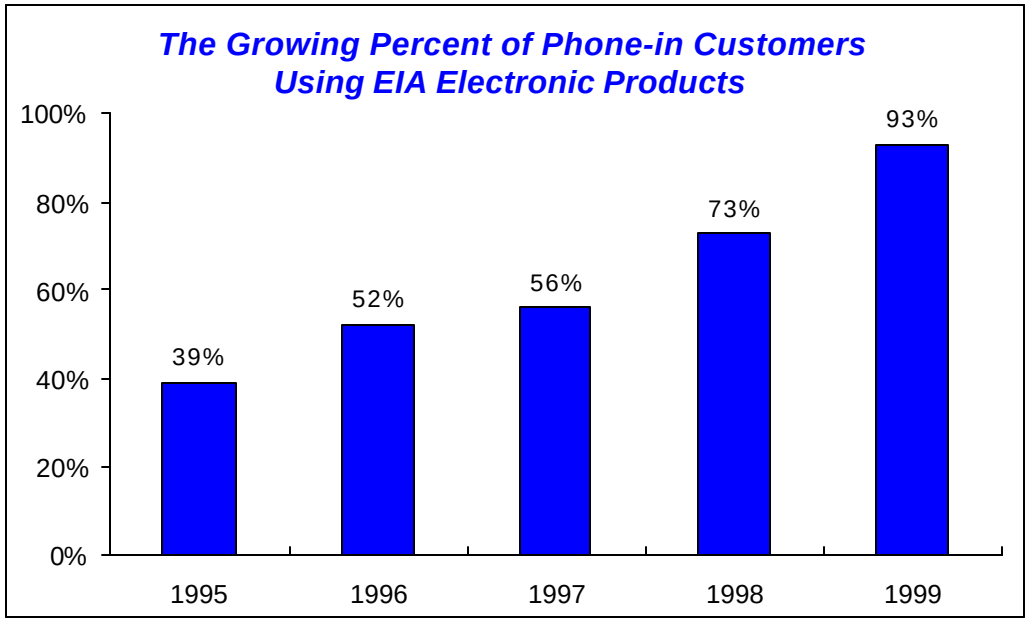

Figure 6

satisfied customers, there are still areas which can benefit from improvement. EIA's financial and market results indicated that in spite of overall reductions in both funding and staffing between FY 1995 and FY 1999, EIA has expanded our customer base and improved our products' attributes. Through large-scale electronic and media dissemination of our products, EIA has improved the availability of energy information while reducing printing and distribution costs. EIA will continue to focus on achieving higher levels of efficiency and effectiveness.

Customer Satisfaction and Survey Activities

EIA has conducted an annual survey of its telephone customers each year since FY 1995, establishing a continuing time series of performance results. EIA has also conducted surveys of users of its Web site, CD-ROM, and other energy data dissemination methods, and more than 2,000 recipients of EIA printed publications. In all of these surveys, customers are asked to rate their overall satisfaction, and rate EIA on five attributes of customer service (courtesy, promptness, accessibility, knowledge of the material, and ability to understand customer needs) and on five attributes of product quality (availability, relevance, accuracy, comprehensiveness, and timeliness).

In each year since FY 1995, at least 95% of EIA's telephone customers reported they were either satisfied or very satisfied with EIA's overall customer service. In addition, the number of customers using EIA electronic products has increased drastically (see Figure 6).

In terms of the EIA products' quality, telephone customer satisfaction ratings overall are also high (86% to 94%) over the past five years. Furthermore, a one-time question in 1997 was added (at the request of DOE's Office of Quality Management) which showed that 87% of telephone customers trusted EIA to provide a quality product to a "great extent" or "completely." However, among the five quality attributes, timeliness has historically had lower satisfaction scores. EIA has specifically targeted timeliness (which includes decreasing the time between when data are collected and when they are ready for dissemination, and increasing the speed of dissemination) as a key area of improvement. A new Web site customer survey to be fielded early in FY 2000 will follow-up with our customers on product timeliness improvement.

EIA collects energy data from respondents who are required to fill out survey forms. The more intuitive and understandable the forms, the higher quality the data. In 1998, EIA initiated three projects to redesign specific survey forms, one using focus groups and two using a technique called cognitive interviewing. This process involves respondents completing a survey with an interviewer while "thinking out loud," so the interviewer can see how they interact with the questionnaire and what meanings they get from terms and instructions. (Prior to 1998, EIA relied heavily on post-collection techniques, such as error checks and periodic expert reviews.) In June 1998, EIA used cognitive interviewing to test a redesign of the Manufacturing Energy Consumption Survey, prior to the 1999 data collection cycle. The revised version is longer but has a more intuitive design, and instructions printed throughout the survey directly in places where respondents need to read them (rather than in a separate booklet). In redesigning this survey, EIA conducted cognitive interviews at seven local manufacturing establishments, then revised the survey and pretested it. Respondents, who agreed to serve as pretest subjects, reported the revisions improved the survey design, the new format was easier to follow, and the additional length of the survey was not a concern.

EIA staff was trained in conducting cognitive interviews so these techniques can be used on other EIA data collections. In the near term, EIA plans to employ cognitive interviewing as a part of the information collection redesign efforts in the natural gas area. Building on these successes, EIA plans to make use of focus groups and cognitive interviewing as key processes in revamping energy surveys.

Increasing Customer Usage

EIA has engaged in an aggressive program to expand the availability of electronic information, upgrade energy data dissemination, and enhance coverage of energy information issues in the news media. This increased use of electronic technology (Internet, CD-ROM, etc.) for energy data dissemination has led to an explosive growth in the number of customers for our data, as well as increased the breadth of information distributed. For example, the growth in monthly users of EIA Web site is remarkable (see Figure 7 - note numbers of monthly users do not include EIA employees accessing the site). Rapid growth like that seen in the use of EIA's Web site access is evidenced in Web site file access. Of note, during 1997, EIA set a goal to increase the average number of unique monthly users of its web site by 20% annually, from a baseline of 37,000 users sessions. Between

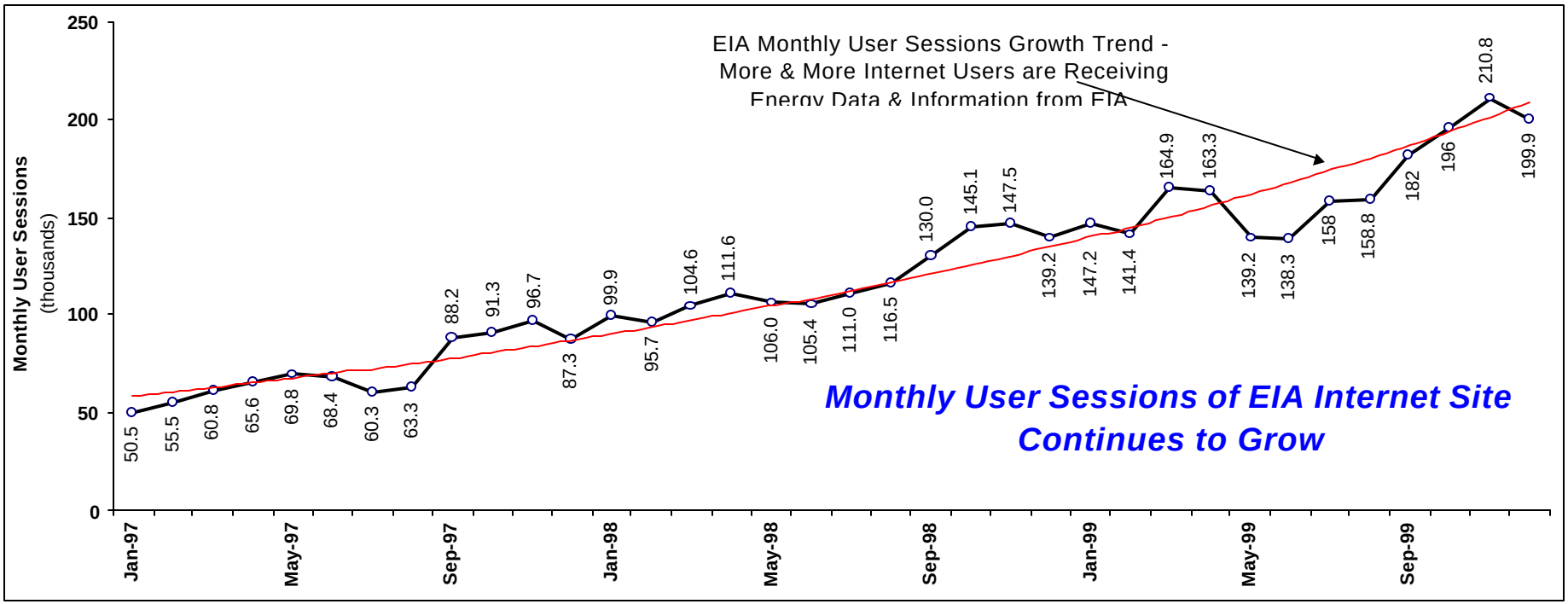

Figure 7

1996 to 1997 the growth in usage was 180%. By the end of 1997, EIA exceeded the goal with an average of 71,500 user sessions. By the end of 1998, EIA averaged 87,000 user sessions, again exceeding the goal. For 1999, EIA averaged 163,600 monthly user sessions, an increase of more than 64.7% when compared to the 1998 average monthly usage level. For December 1999 EIA was witnessing about 200,000 user sessions. For 1999, information downloaded from the EIA Web site averaged 94 gigabytes per month, or about 1.13 terabytes of energy information for the year. For December 1999, 1.4 million files were downloaded. This represents a 76% increase when compared to December 1998.

One result of the increase in the electronic availability of our information has been a dramatic increase in the number of customers contacting the National Energy Information Center for on-line support. For example, e-mail traffic is up nearly 114% between 1998 and 1999. Another result of our expanded use of electronic dissemination is a 35% reduction in the number of paper publications and a 50% reduction in publication printing costs since 1994, which results in avoiding more than $500,000 in expenditures per year.

EIA has dramatically increased the distribution of its information by becoming the dependable source of objective energy information for the news media. This has enabled our energy data to be widely use by the general public with minimal cost to the agency (Figure 8). In addition to the steady growth in media use of EIA information, public concern about price volatility in the gasoline and heating oil markets led to the increases in media citations in the spring of 1996, the winter of 1997, and the fall and winter of 1998-1999.

Another example of outcomes and impact, is the number of copies of EIA's recent brochure "Why Do Natural Gas Prices Fluctuate So Much?" being requested by natural gas companies for distribution to their customers. These natural gas companies see this brochure as an excellent way to explain to their customers why natural gas prices fluctuate. In addition, natural gas companies can note that this information was prepared by a non-biased source.

Perhaps the area most difficult to quantify is the impact of EIA's data on the policy development process. EIA has substantial evidence that our information and analyses are sought prior to legislative action. Most recently, as the restructuring of the electric power industry has moved to the front of the energy debate, EIA's briefing on how the industry works have been presented to more than 50 Congressional staff, principally from the Senate Energy and Natural Resources Committee. EIA's Administrator was requested to testify before the Energy and Power Subcommittee of the House of Representatives on future competitive electricity prices. EIA's brochure "The Restructuring of the Electric Power Industry - A Capsule of Issues and Events" which clarifies the complex issues involved, is one of the most popular files on our Web site with more than 2,000 printed copies distributed. EIA was requested by the Chairman and ranking minority member of the House Science Committee to prepare a study on the cost and economic impacts of proposed reductions in greenhouse gas emissions, in accordance with the Kyoto agreement. EIA believes the inclusion of our policy-neutral input on these major issues will help result in informed debate and sound policy decisions.

Of special note, EIA's Web site has won several awards for quality and content. Most recently, EIA's Web site was selected by *Government Executive* magazine as one of the best sixteen Federal Web sites for 1999, from 120 nominated web sites. In the announcement of the winners, *Government Executive* stated, "EIA is a tiny agency, so the comprehensiveness of its site - and its ease of navigation - amazed the judges. Everyone

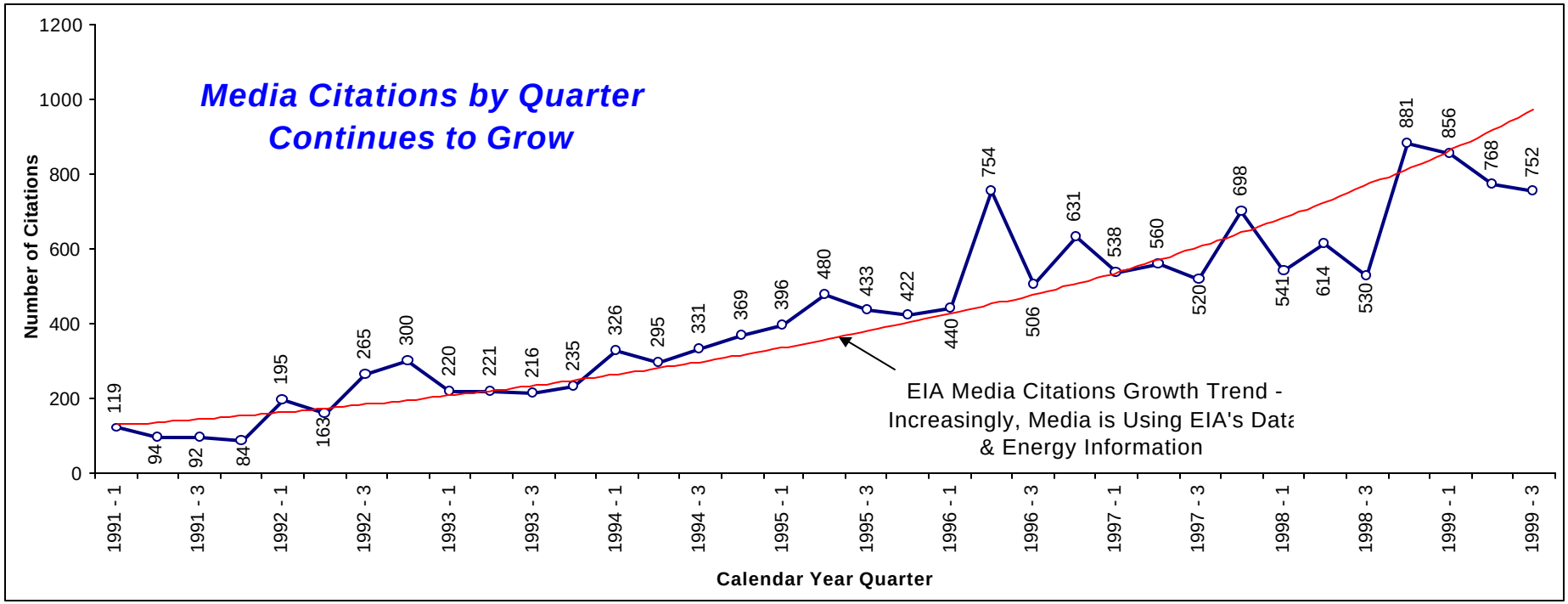

Figure 9

who works in the energy industry is well-served by this site." EIA also was commended for making full use of the power of e-mail by featuring e-mail notification lists for more than 30 different energy subjects.

In summary, EIA is serving a growing customer base, and achieving high levels of customer satisfaction with our energy data, analyses, forecasts, and timeliness. During FY 2001, EIA expects to receive 3 million inquires for energy information. To meet future customer requirements, EIA will need to leverage evolving information processing and communications technologies, explore and develop innovations to improve our capabilities, and align our resources to effectively meet the energy information needs of Government, industry, and the public.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(dollars in thousands)
PROGRAM FUNDING PROFILE
National Energy Information System

Activity	FY 1999 Enacted	FY 2000 Enacted [1]	FY 2001 Base	FY 2001 Request	Program Change Request vs. Base Dollar	Program Change Request vs. Base Percent
Oil and Gas						
Operating Expenses	$ 17,555	$ 18,197	$ 18,197	$ 19,249	$ 1,052	5.8%
Coal, Nuclear, Electric, and Alternate Fuels						
Operating Expenses	$ 9,979	$ 10,810	$ 10,810	$ 10,600	$ -210	-1.9%
Energy Markets and End Use						
Operating Expenses	$ 9,067	$ 9,845	$ 9,845	$ 10,355	$ 510	5.2%
Integrated Analysis and Forecasting						
Operating Expenses	$ 8,366	$ 9,112	$ 9,112	$ 9,122	$ 10	0.1%
Information Technology						
Operating Expenses	$ 9,795	$ 9,014	$ 9,014	$ 9,629	$ 615	6.8%
National Energy Information Center						
Operating Expenses	$ 2,199	$ 2,213	$ 2,213	$ 2,314	$ 101	4.6%
Statistics and Methods						
Operating Expenses	$ 2,255	$ 2,399	$ 2,399	$ 2,408	$ 9	0.4%
Resource Management						
Operating Expenses	$ 11,284	$ 10,778	$ 10,778	$ 11,323	$ 545	5.1%
SUBTOTAL	$ 70,500	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%
Use of Prior Year Balances [2]	- 315	- -	- -	- -	- -	- -
TOTAL	$ 70,185	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION

Proposed Appropriation Language

For necessary expenses in carrying out the activities of the Energy Information Administration, [$72,644,000] *$75,000,000*, to remain available until expended.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(Tabular dollars in thousands, Narrative in whole dollars)

PROGRAM MISSION

On line and off the shelf, the Energy Information Administration (EIA) is the first place to go for the last word in energy information. The EIA is a leader in providing high-quality, policy-independent energy information to meet the requirements of Government, industry and the public in a manner that promotes sound policymaking, efficient markets, and public understanding. As part of EIA's strategic plan, the following goals have been set:

- Assure products and services are relevant to the needs of customers
- Assure data, analyses, and forecasts are of the highest quality
- Provide customers fast and easy access to public energy information
- As a performance driven organization, conduct business in an efficient and cost-effective manner
- Work together to achieve the full potential of a diverse workforce

As an independent statistical/analytical agency, EIA has two principal roles. First, EIA's primary responsibility is to conduct the functions required by statute. These functions include the development and maintenance of a comprehensive energy database, and the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors. EIA also prepares specific reports which are required by law. Second, EIA responds to inquiries for energy information. The primary customers of EIA services are public policymakers in the Department of Energy and the Congress. Customers include other agencies in the Executive branch and independent agencies of the Federal Government, State and local governments, the energy industry, educational institutions, the news media, and the public. To preserve credibility with this broad client base, EIA maintains its independence from policy development. Consequently, EIA's role is to provide data and perform analyses. EIA does not develop or take policy positions. EIA has analyzed, and will continue to analyze, policy proposals generated elsewhere. EIA's strategy is to make its broad mix of products and services available to its customers through the continued use of publications, and an expansion of electronic dissemination via the EIA web site and CD-ROM.

REQUEST

EIA's FY 2001 Congressional budget request is $75.0 million. This request is $2.4 million over our FY 2000 appropriation of $72.6 million and 11.4% below the FY 1995 appropriation of $84.6 million (or 18.8% below after adjusting for inflation). As can be seen in Figure 1, EIA's budget has undergone a dramatic decrease over the past two decades, resulting in a reduction of 57.5% (adjusted for inflation) since FY 1980. In FY 2001, EIA intends to continue our base program, enhance international analysis capabilities, begin work associated with assessing the accuracy and reliability of several energy data systems, continuing overhauling several survey frames and data systems, and seek further efficiency gains through the use of information processing and communications technologies.

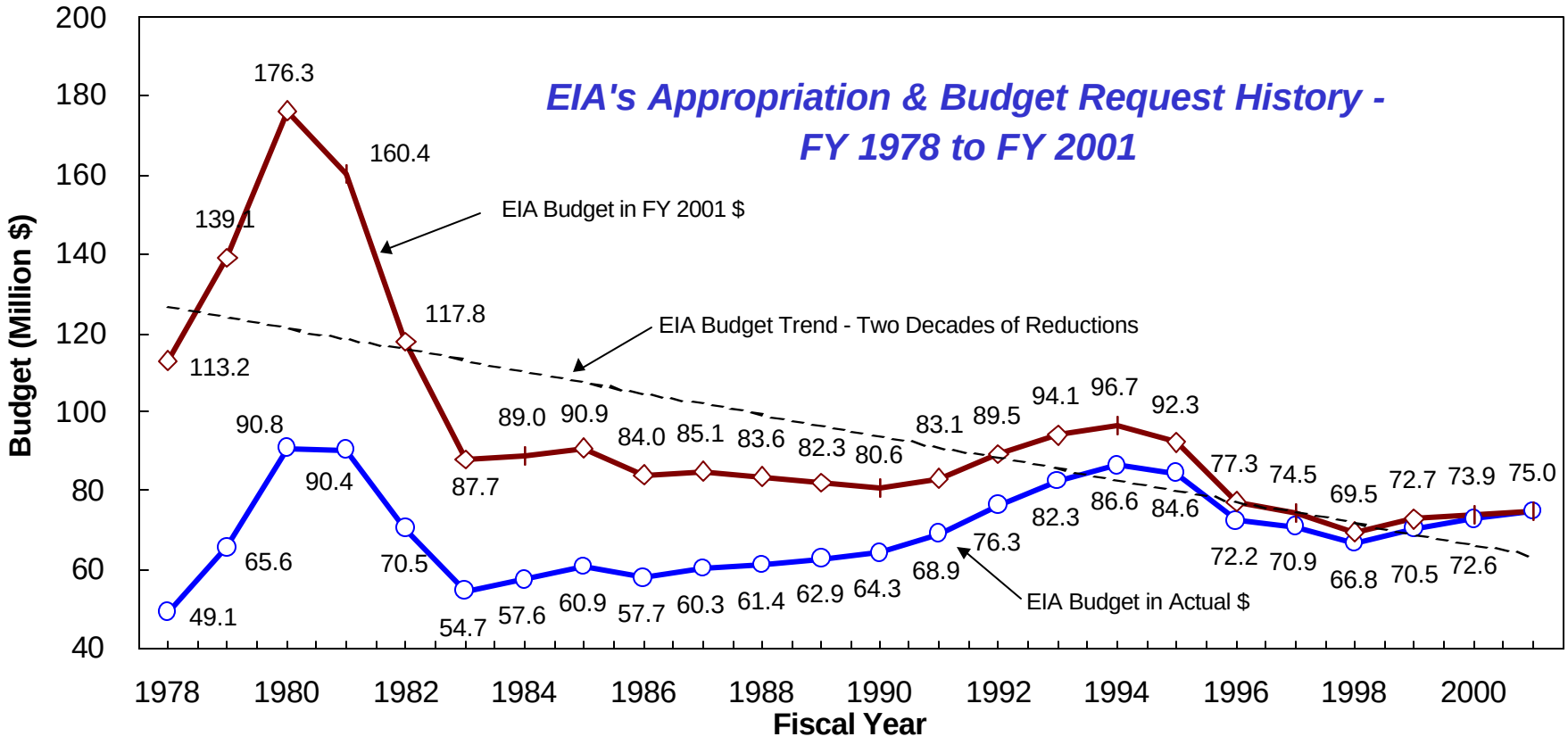

Figure 1

EIA continues to stand alone as the only statistical agency to absorb significant budget reductions since FY 1994 (see Figure 2). As one of the Federal Statistical Agencies, EIA has one of the smallest annual budgets, accounting for only 1.8% of the total FY 2000 U.S. statistical agencies budget requests (see Figure 3).

EIA has also absorbed significant Federal staff reductions. The work formerly done by these employees was not shifted to contractors, as EIA absorbed even greater reductions in contractor staff levels. Since 1995, EIA's total workforce, including both Federal and contractor employees, has decreased from approximately 1000 personnel to approximately 674 personnel in 1999, a 33% reduction.

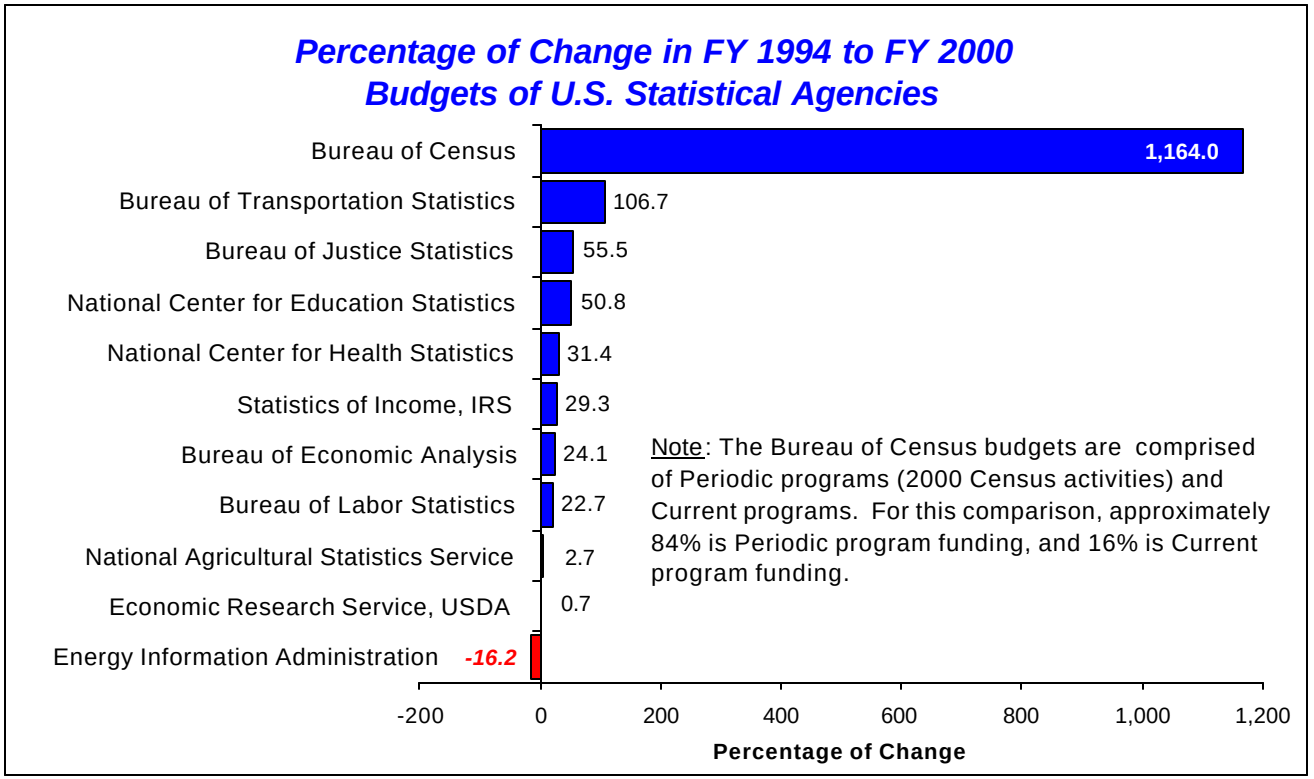

Figure 2

Base Program

In FY 2001, EIA's base program will consist of the maintenance of a comprehensive energy database, the dissemination of energy data and analyses for a wide variety of customers in the public and private sectors, the maintenance of the National Energy Modeling System for midterm energy markets analysis and forecasting, the maintenance of the Short-Term Integrated Forecasting System for near-term energy market analysis and forecasting, customer forums and surveys to maintain an up-to-date product and service mix, and the continued expansion of electronic information dissemination via the EIA Web site and CD-ROM.

Program Investments

For FY 2001, EIA will continue to focus on: (1) The overhaul of EIA consumption surveys to update these 20-year-old surveys, (2) The overhaul of the natural gas and electricity surveys and data systems to recognize and accommodate the changes in the natural gas and electricity industries brought on by deregulation and restructuring. (3) Enhancement of EIA's international analysis capabilities in order to assess carbon mitigation, permit trading, and other global climate change issues. (4) Reversing the deterioration in data quality and accuracy in several energy areas.

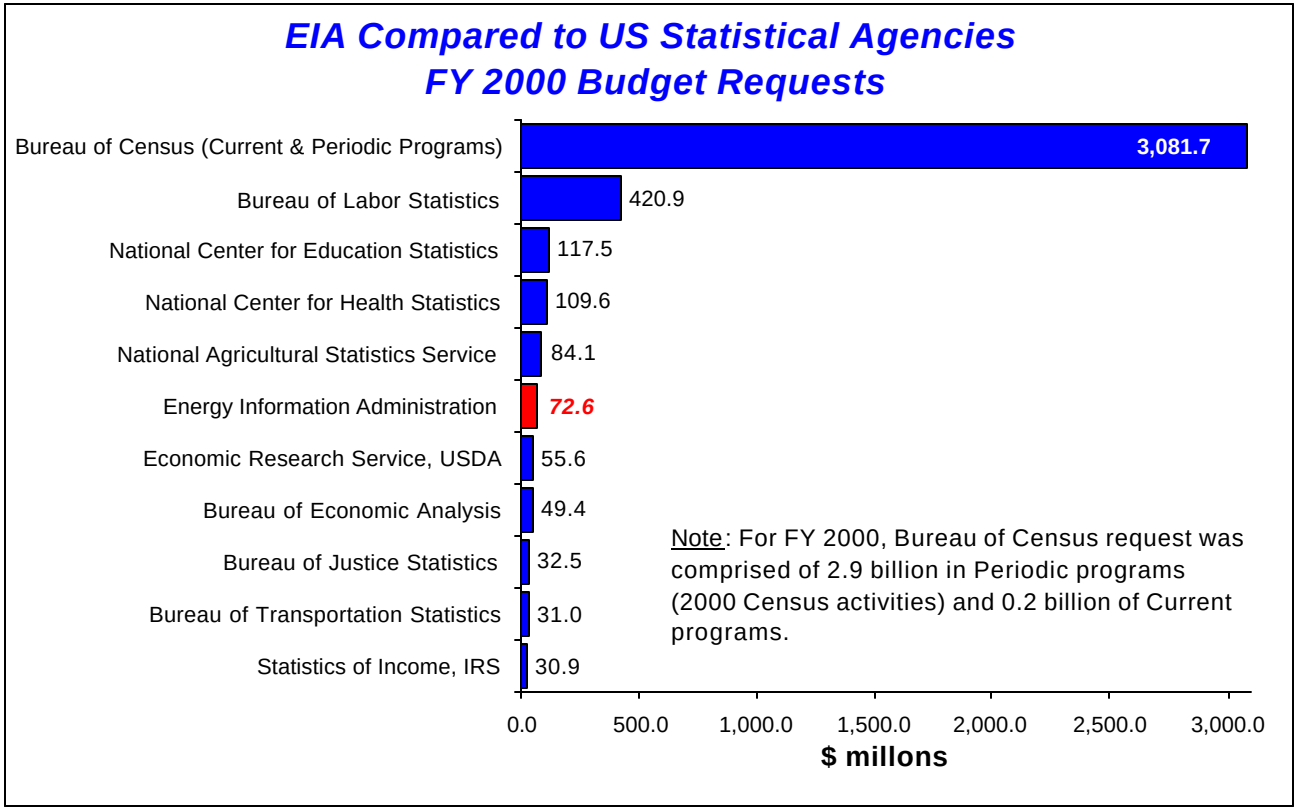

Figure 3

Initiatives

! Continue Overhaul of the Energy Consumption Surveys - Reconstructing a 20-year-old design.

EIA's energy consumption surveys are the Nation's most comprehensive source of data on energy use in major sectors of the United States economy. These surveys also include the characteristics of energy users. EIA presently has surveys in place covering 3 major sectors: households, commercial buildings, and manufacturers. The data from these surveys enlighten public policy debate on energy programs and issues, describe the potential markets for technology and energy efficiency improvements, and contribute to public understanding of energy use and its environmental impacts.

For several reasons, the consumption surveys will become more visible and critical over the next several years. Two principal reasons are: (1) The debate on greenhouse gas emissions and global warming potential will cause the United States, as well as other countries, to assess and understand the impact from major sources of emissions generated by human activity. (2) With the restructuring and deregulation of the electric and natural gas

industries, energy use and price data, especially at the consumers' level, are much more difficult to obtain from suppliers. This type of information will be especially useful to State governments, who are currently working with EIA and increasingly rely on EIA data to understand and effectively manage the current and emerging effects of energy industry restructuring's impact on energy consumers in their State.

In FY 2000, EIA initiated a redesign of the consumption surveys. This redesign initiative is critical because EIA's energy consumption surveys will have operated for more than 20 years based on the same statistical frame design. (Frame design is the complete population from which a statistically representative sample is drawn). This is far beyond the usual 10-year life-cycle tied to the census, but funding was not provided to update the surveys following the 1990 census. (Common statistical practice with complex area samples, especially those employing area-based designs, is to redesign after each decennial census to realign the coverage of the survey in order to reflect the current population demographics.) The sequential updating methodology used over the last 15+ years is a less than optimal method as compared to a decennial redesign in attempting to keep the current consumption surveys as up-to-date as possible. However, the performance and reliability measures of EIA's consumption surveys started to indicate deterioration. For example, commercial building square footage estimates from the 1995 Commercial Building Energy Consumption Survey declined from the level measured by the previous survey (Figure 4), a result at odds with all economic indicators of commercial activity.

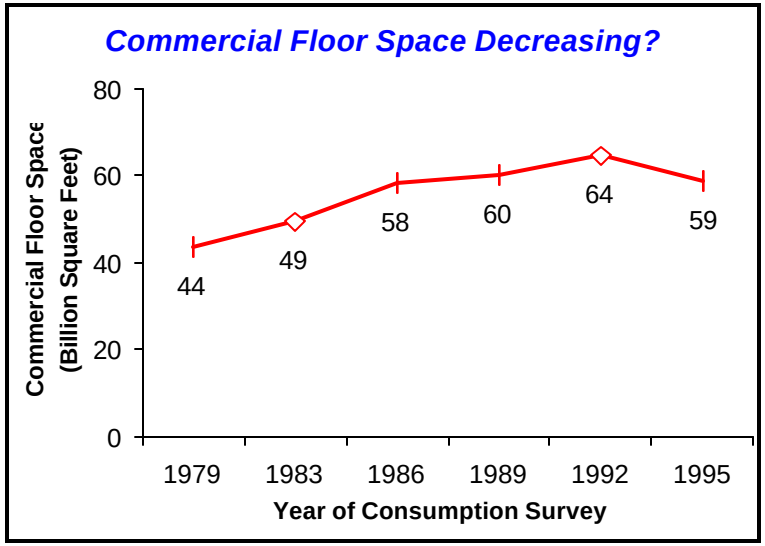

Figure 4

Funds will be used to continue support of Federal and contractor staff engaged in updating the survey frames and sampling. The redesign will realign the consumption surveys' coverage with the distribution of residential and commercial buildings populations as indicated by the 2000 census. Started in FY 2000, this multi-year effort within Energy Markets and End Use is expected to continue through FY 2001 and for three additional years, after which the updated sample design, survey frames, and data systems will be fully implemented. EIA estimates the cost for completing the consumption surveys redesign will be $600 thousand per year.

- Maintain Quality of Energy Consumption Data

Because of the increasing importance of consumer-based data, it is critical to maintain the quality of the data from these surveys. Starting with FY 2001, additional resources are needed to support the operation of these surveys. A permanent addition of $550 thousand in Energy Markets and End Use funding is needed to offset unavoidable increases in survey costs due to (1) the tight labor market for survey field workers; (2) the increasing amount of work needed to keep survey response rates high in the current cultural climate, with respondents increasingly more difficult to reach and more resistant to completing surveys; and (3) the need for expanded and more complex energy consumption and expenditures data collection procedures due to the more complex energy supply structure resulting from the natural gas and electric industry restructuring. Over the past several years, ongoing requirements for EIA to fund annually increasing survey costs from a decreasing budget have eroded EIA's capability to continue operating the three consumption surveys in a way that ensures high-quality data, and have required EIA to conduct these surveys once every four years.

If a permanent increase in EIA's operational base is not provided in FY 2001, EIA will need to choose one or more courses of action:

(1) Eliminate the personal interviews, changing to telephone or mail surveys and/or lengthen the time between surveys to 5 or more years. This course will increase levels of non-response, reduce callback efforts to convert non-respondents, and reduce editing and data cleanup activity. All of these outcomes will degrade the quality and integrity of the energy consumption data.

(2) Discontinue one of the surveys in order to maintain the quality of operations, and the resulting data, for the other two. This results in the loss of information in one of the consumption sectors.

- Continue Overhaul of the Electricity Surveys and Data Systems - Capturing Changes in a Restructured Industry.

In FY 1999, EIA initiated a multi-year effort to overhaul the surveys used to gather information from this nation’s restructuring of electricity generation and distribution. All of the EIA areas associated with electricity data collection, analysis, and reporting are undergoing significant revision and overhaul to reflect this evolving competitive industry. EIA will continue to make use of Federal and contractor staff to complete revision of the forms used to collect data, to develop new survey forms to reflect the unbundling of services, develop and implement new computer systems to process the information, and develop new data disclosure methods to protect the confidentiality of proprietary information. EIA estimates the FY 2001 and next year’s costs for the overhaul of the electricity surveys to be $1.0 million each year. To date EIA is on schedule with this effort, and plans to complete this endeavor in FY 2002 with the full implementation of the overhauled electricity data collection and reporting systems.

! Overhauls of Surveys and Data Systems Are Continuing in Order to Reflect Changes in the Restructured Natural Gas Industry.

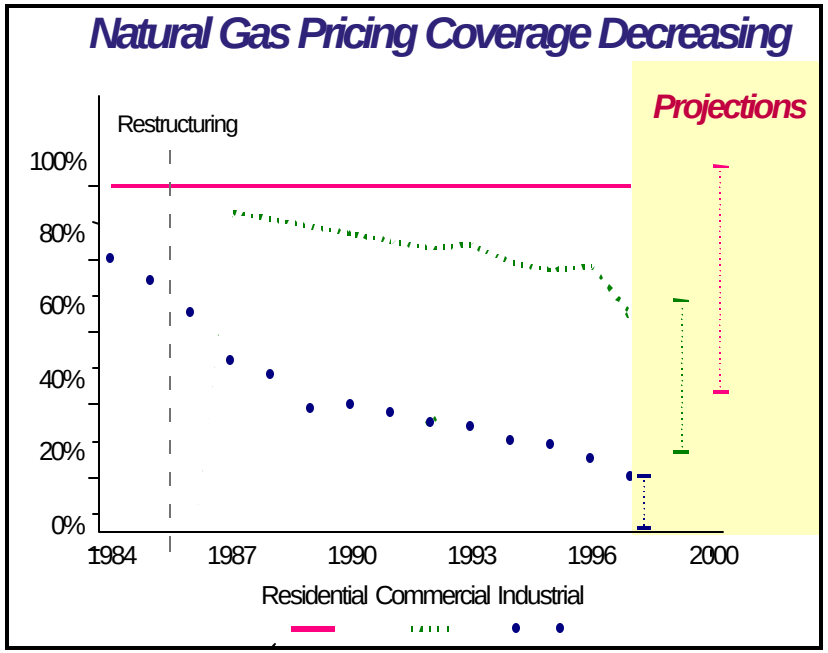

Figure 5

EIA's ability to provide data and information on the natural gas industry has been severely challenged by changes in the regulatory environment and corresponding industry restructuring. In FY 1998 for example, industrial price information for only 15% of the gas used by industrial customers was captured by EIA surveys, down from 75% coverage in FY 1984 (see Figure 5). Furthermore, coverage in the commercial areas dropped from more than 90% in FY 1987 to about 65% in FY 1998. With a move toward more competition at the retail level for residential and small commercial customers, coverage of the prices paid could be substantially reduced from the nearly 100% level of coverage we currently have. In addition, there are major segments of activity relating to prices and volumes for which no information is collected by EIA, such as the cost of underground storage, the cost of transportation, and price and physical transactions at market centers and market hubs.

Restructuring of the electric industry will also effect the information available on prices paid by electric generators for natural gas. Since natural gas is usually the swing fuel in electric generation, information on these prices is essential in understanding the fuel decisions made by electric generator operators and the subsequent impact on electricity prices. With the requested funding, EIA will continue to employ staff and contractors to progress on a three-phase plan to overhaul the natural gas surveys and data systems. The three phases are: (1) collect detailed information on the evolving structure and operation of the natural gas industry identifying critical data needs and sources; (2) develop and field test natural gas surveys and data systems; and (3) implement the overhauled natural gas survey and data systems. This multi-year overhaul of the natural gas data collection and data systems will continue for one more year when the updated systems are fully implemented. For FY 2001, EIA estimates the cost to continue the overhaul of the natural gas surveys and data systems to be $800K.

Starting with FY 2001, EIA is requesting a permanent increase of $175 thousand to provide the funding needed to address natural gas industry frames' (the universe of potential respondents) maintenance. With changes in the natural gas industry, maintaining frames for the existing populations has become increasingly difficult. This difficulty results from the new corporate entities being formed to market natural gas, as well as merger and consolidation activity in the industry. In addition, corporate downsizing and staff turnover has also increased the effort required by EIA to track changes in the industry. EIA Federal and contractor staff resources are not adequate to monitor the changing structure and rapidly changing market participants. To address these deficiencies, EIA needs to institute a higher level of frames' maintenance than was needed when the industry was regulated. With the requested increase, EIA would have the resources needed to: (1) monitor mergers, acquisitions, corporate reorganizations, and the

formation of new companies in the natural gas industry, (2) continually assess the impact of those corporate changes on reporting requirements, and (3) continually assess the impact of these ongoing corporate and industry changes on EIA's operation and processing of monthly and annual surveys.

! Continue Enhancement of International Energy Analysis Capabilities.

The requests for EIA to conduct carbon analysis and produce projections on the international level continue to increase. Currently, EIA's international modeling capability is unable to assess the economic consequences on the United States of energy-related compliance options, commitments, and actions of foreign countries. EIA does not have the policy analysis capabilities, or the capability to represent emissions trading between countries and/or regions. With the requested funding, EIA will continue to engage Federal staff and contractors in the development and/or acquisition of an international modeling capability to assess energy policies, technological change, and international carbon permit trading schemes. Started during FY 1999, the goal of this multi-year project is to acquire an international modeling capability, develop a framework for the modeling of international permit trading schemes using this capability, and ensure consistency with the U.S. projections from the National Energy Modeling System (NEMS). EIA plans to complete this initiative following two additional years of effort, at which time EIA will be in the position to provide reliable analysis and projections on international policies.

In FY 2001, EIA will develop a preliminary version of the model, System for Analysis of Global Energy Markets, based on the project requirements as defined in EIA's Report: "Design and Development Plan for the System for Analysis of Global Energy Markets". Also, in FY 2001, EIA will use this preliminary model to produce the forecasts for the International Energy Outlook 2001. The model methodologies will be enhanced over the next two fiscal years to represent the critical areas of regulation, technological improvement, and international carbon permit trading.

! Confront and Correct Critical Petroleum and Natural Gas Data Quality Issues.

(1) Weekly/Monthly Petroleum Supply Data Quality Control - The accuracy of petroleum supply and demand data is deteriorating. The loss of accuracy is the result of a long, slow deterioration in the quality of the data reported to the EIA that cannot be fully analyzed and corrected with the current level of resources. With the large volume of mergers, acquisitions, joint ventures, and company asset sales, EIA has found it increasingly difficult to track and monitor the changes in the industry while maintaining its petroleum frames (that is, up-to-date lists of potential respondents). EIA will engage Federal and contract staff to increase our efforts to identify the causes of the data quality deterioration, and implement processes to improve and maintain the high data quality needed to provide an accurate understanding of the petroleum industry and petroleum markets. Beginning in FY 2001, EIA estimates this project will take two years to complete.

(2) Petroleum Form Changes to Maintain Relevance - As environmental regulatory changes mandated under the Clean Air Act Amendments of 1990 are entering Tier II, new standards for low sulfur gasoline, national versus regional standards, low sulfur diesel, and other diesel specification changes will be implemented. In addition, environmental concerns over the use of ethers in gasoline, particularly MTBE, are leading to discussions of a ban on this significant gasoline component. These changes will necessitate changes in EIA's survey forms and reporting system as early as 2002. Starting in

FY 2001, the additional funding will support Federal and contractor staff to: (1) conduct analyses on the impact of these regulatory changes, and (2) modify survey reporting forms. Beginning in FY 2001, EIA projects this project will take two-years to complete.

The quality issues cited above are critical to the continuation of EIA's ability to provide accurate and timely petroleum information. If additional funding for these short-term initiatives and ongoing work is not made available, EIA proposes to terminate the operation of two State-level data surveys: the EIA-821, "Annual Fuel Oil and Kerosene Sales Report," and the EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption," and two crude surveys: the EIA-182, "Domestic Crude Oil First Purchase Report," and the EIA-856, "Monthly Foreign Crude Oil Acquisition Report." The resources needed to operate these surveys, would be used to begin addressing the required upgrades in the previously cited oil survey data and information processing systems.

(3) Quality & Timeliness of Natural Gas Production Data - EIA continues to witness a deterioration in the timeliness of responses to natural gas surveys. Although changes underway in survey design and approach should address most of these issues, in the interim, EIA has increasingly relied on imputation and early estimation procedures in order to release these data in a timely manner. The principal impediment to improved timeliness relates to the sources of the information, which relies on State agencies and the Minerals Management Service. These respondents collect information to support their core activities and then must synthesize information to develop abstracts in order to complete the EIA forms. This synthesis is a time-consuming process, which is a key contributing factor to the deterioration in the timely submission of data to EIA. For this task, EIA proposes to engage Federal and contractor staff to develop and implement improved methods of receiving reliable and timely data. Beginning in FY 2001, EIA estimates this project to take two-years to complete at $40 thousand for this year.

(4) Crude Oil Production System Redesign - This EIA information system is over ten-years old and needs to be reprogrammed in order to function within the current information technology base. EIA resources were significantly taxed to cope with poor and late data reporting and radical changes in price and production levels during 1998. This resulted in poorer oil production estimates, and the need for an unusual number of data revisions. Requested funding will be used by Federal and contractor staff to upgrade the system. The upgraded system will have the compatibility to interface with other EIA data systems, and provide the necessary flexibility, timeliness, and quality assurance to support the monthly and annual dissemination of oil production data at the State level. Beginning in FY 2001, EIA estimates the cost of this one-year project at $50 thousand.

(5) Update/Rewrite Oil and Gas Integrated Field File (OGIFF) System - EIA's OGIFF database is the premier U.S. tool for analyzing proved oil and gas reserves and ultimate recovery appreciation. The current system is over 10-years-old and is written in a data base language no longer supported. It is not cost effective to update the current system as the expertise is no longer available for this unsupported data base language. With the requested funding, EIA will engage Federal staff and contractors to rewrite the OGIFF system for operation on a contemporary SQL database. Starting in FY 2001, EIA estimates the cost of this one-year project at $130 thousand.

- Continued Development of Common Collection and Processing System (CCAPS) - Integrate Energy Surveys and Incorporating Data Collection.

EIA's is continuing the development and integration CCAPS survey data collection and processing. The goal is to significantly reduce data collection and processing costs, reduce software life-cycle costs, and to continually add value by improving the timeliness of energy information provided for EIA respondents and customers. To date, several coal and natural gas surveys have been transitioned into CCAPS. EIA plans to place these surveys in operation during the year 2000 survey cycle. During FY 2000, EIA will begin to transition the petroleum supply surveys. During FY 2001, EIA plans to complete the integration of the petroleum supply surveys into CCAPS, and begin work on the remaining EIA energy surveys' transition into the CCAPS data processing structure. In addition, EIA plans to start incorporating data collection into the CCAPS framework to enhance the efficient flow of energy data collection to processing. CCAPS will incorporate a variety of collection methods including Internet, mailed software (the successor to EIA's PEDRO), and mailed paper forms.

During FY 2001, EIA plans to start work on integrating a common data querying and extraction capability within CCAPS. With this capability, CCAPS will be able to calculate all the aggregates within and across surveys. CCAPS will also provide a flexible tool for developing drafts of modified or new tables being considered for dissemination. Once the development of CCAPS for survey data processing is complete, and in keeping with our Strategic Plan, it is EIA's plan to integrate an On-Line Analytical Processing (OLAP) capability to provide users easy access to the data. Initially, an OLAP system will be developed for EIA's Local Area Network (LAN) users, with the long-term goal of providing this capability to the public via the Internet. EIA estimates the cost in FY 2001 to pursue these CCAPS initiatives to be $500 thousand.

Efficiency Investments

EIA will continue to improve its base programs through investing in methods and integrating technologies that achieve efficiency gains. Over the past several years, EIA has invested in new, streamlined data systems, increased use of personal computers, enhanced local area networks, and upgraded servers and enterprise servers, to access, process, and disseminate information. EIA plans to continue these endeavors, with an increasing number of EIA products being disseminated only in electronic form. Other cost savings will occur through eliminating redundant practices, by continuously aligning our workforce of Federal and contractor staff to efficiently and effectively address EIA's evolving requirements. In addition, EIA will continue analyzing processes with the purpose of streamlining operations, reducing time requirements, retiring or replacing systems which are inefficient or no longer required, and consolidating program functions where efficiencies can be attained.

EIA Omnibus Procurement

With the purpose of improving EIA's contractor cost efficiency, the EIA Omnibus Procurement (EOP) was awarded in mid-December 1997. This action represents a fundamental change in the way EIA awards tasks. Prior to this initiative, EIA employed several contractors who were individually selected following a long competitive process. Tasks awarded to these contractors were on a cost-plus-fixed-fee basis. With a cost-plus-fixed-fee task, the actual cost of each task is not known until the work was completed, so the final costs of some cost-plus-fixed-fee tasks are higher than

expected. With the ability provided within the EOP to issue firm-fixed price tasks, EIA knows what a task will cost with far less potential for unexpected or unanticipated cost increases at the conclusion of the task.

The EOP award also supports EIA's Business Reengineering goals which promote continuous efficiency improvements. In addition, the EOP award supports the goals stated in the Federal Acquisition Streamlining Act (FASA) which promotes simplification of procurement and increased use of competition at the task level through the use of multi-award contracts. To pursue this contract efficiency initiative, EIA established a Procurement Planning Advisory Group. This group collaborated with the Department, the Office of Management and Budget, and the Small Business Administration, to investigate alternatives to improve EIA's task award cost effectiveness. The group's efforts resulted in the EOP.

The EOP is a multi-award contract with three functional areas: Information Management and Product Production, Energy Analysis and Forecasting, and Information Technology. With the EOP, small, 8(a), and small disadvantaged businesses having significant opportunities to contend for all competed task orders within their functional area. EIA started awarding task orders under the EOP in May 1998, with a goal of 10% being firm-fixed price task orders. For FY 1999, of the 143-task orders were awarded, 53% of the task orders are firm-fixed price.

With the EOP and competition at the task level, EIA is maximizing the opportunity to receive the best value for every tax dollar used to engage contractor support. In addition, the previous method of competing every individual contact was replaced with a more cost effective multi-award contract competition. As a forerunner in the Department of Energy headquarters in implementing a multi-award contract, EIA has lead the way for other parts of the Department considering this type of contracting to improve the efficiency and effective use of their contractor support.

STAFFING

In the Department of Energy's Workforce 21 Initiative, EIA's FY 2001 end-of-year Federal staffing level is 375 FTEs. EIA plans to rely on normal attrition and prioritized hiring to maintain Federal staffing level. With the revised Federal staff targets, and through the initiation of a staff replacement program, EIA will be able to address our projected deficits in industry expertise and leadership demographics.

For FY 2001, EIA's salary and benefit costs are estimated to be $35.130 million, or 47% of EIA's $75.0 million request. This estimate assumes an FY 2001 FTE level of 375, no reduction-in-force, OMB personnel cost projections, and a normal attrition rate.

EIA plans to continue the development of Federal staff capabilities to address EIA's future critical needs, and make economical and effective use of contractor support where appropriate. At requested resource levels, EIA estimates a reduction in use of contract support from a FY 1995 ratio of 1.0 Federal personnel to 1.2 contractor staff, to a 1.0 Federal personnel to 0.62 contractor staff. That is about a 50% reduction.

In conjunction with EIA's strategic planning process and workforce management endeavors, EIA will continually examine its staff skill mix and plans to assure future employee development and training needs are addressed. EIA will continue to accomplish its mission by continuously reassessing and realigning its portfolio of products and services, with an increasing reliance on Federal staffing, and the integration of evolving information management and communications technologies.

LINK TO DEPARTMENT STRATEGIC PLAN

As part of the Energy Resources Strategic Goal, DOE committed to "carry out information collection, analysis, and research that will facilitate development of informed positions on long-term energy supply and use of alternatives." EIA is responsible for two action items to support this Departmental objective: (1) increasing the number of unique monthly users of EIA's Web Site, and (2) the dissemination of EIA's midterm forecasts as contained in the *Annual Energy Outlook*. Significant growth in the usage of EIA's Web Site is discussed in the section "Increasing Customer Usage." In FY 2001, EIA is planning to continue publishing the *Annual Energy Outlook*. These items are reflected in the DOE FY 2001 Annual Performance Plan as Item ER5-1.

PERFORMANCE RESULTS

EIA's major output is energy information. The purpose (outcome) of EIA's energy data collection, analysis and dissemination endeavors is to promote sound policymaking, efficient markets and public understanding. Because assessing the level of achievement of these ultimate outcomes is very difficult and costly, we approximate overall achievement of our mission by measuring customer satisfaction levels and product usage. EIA tracks product usage levels in many ways (number of Web site files downloads, number of publications mailed out, number of customers and the products they use, number of telephone inquiries, and number of media citations, etc.). EIA measures customer satisfaction through surveys and focus groups. Both customer satisfaction ratings and usage levels are significant. The results also show that while EIA is accomplishing our mission, has made improvements, and has a growing list of

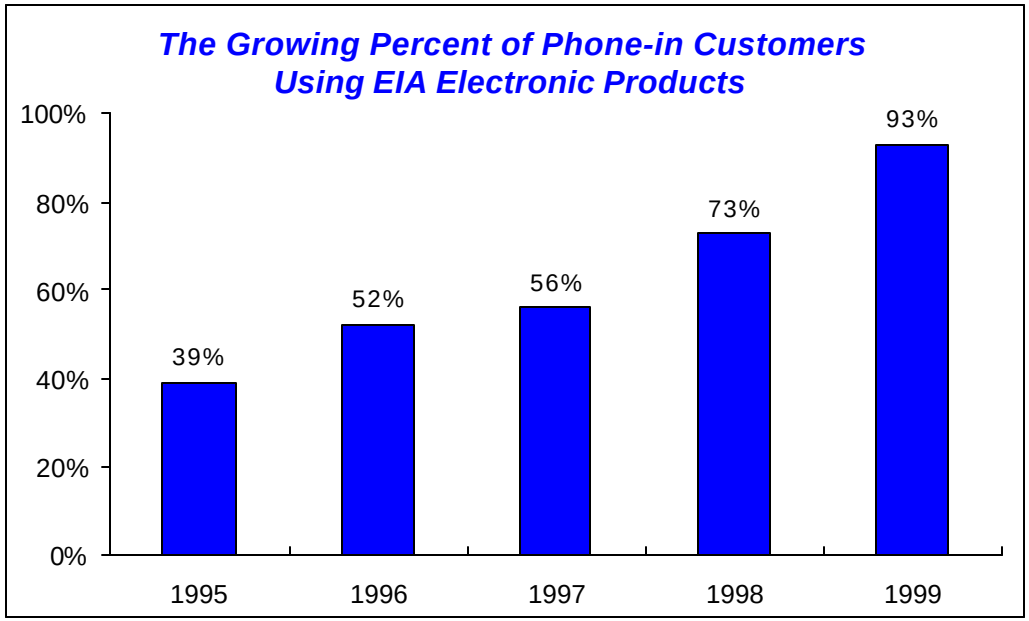

Figure 6

satisfied customers, there are still areas which can benefit from improvement. EIA's financial and market results indicated that in spite of overall reductions in both funding and staffing between FY 1995 and FY 1999, EIA has expanded our customer base and improved our products' attributes. Through large-scale electronic and media dissemination of our products, EIA has improved the availability of energy information while reducing printing and distribution costs. EIA will continue to focus on achieving higher levels of efficiency and effectiveness.

Customer Satisfaction and Survey Activities

EIA has conducted an annual survey of its telephone customers each year since FY 1995, establishing a continuing time series of performance results. EIA has also conducted surveys of users of its Web site, CD-ROM, and other energy data dissemination methods, and more than 2,000 recipients of EIA printed publications. In all of these surveys, customers are asked to rate their overall satisfaction, and rate EIA on five attributes of customer service (courtesy, promptness, accessibility, knowledge of the material, and ability to understand customer needs) and on five attributes of product quality (availability, relevance, accuracy, comprehensiveness, and timeliness).

In each year since FY 1995, at least 95% of EIA's telephone customers reported they were either satisfied or very satisfied with EIA's overall customer service. In addition, the number of customers using EIA electronic products has increased drastically (see Figure 6).

In terms of the EIA products' quality, telephone customer satisfaction ratings overall are also high (86% to 94%) over the past five years. Furthermore, a one-time question in 1997 was added (at the request of DOE's Office of Quality Management) which showed that 87% of telephone customers trusted EIA to provide a quality product to a "great extent" or "completely." However, among the five quality attributes, timeliness has historically had lower satisfaction scores. EIA has specifically targeted timeliness (which includes decreasing the time between when data are collected and when they are ready for dissemination, and increasing the speed of dissemination) as a key area of improvement. A new Web site customer survey to be fielded early in FY 2000 will follow-up with our customers on product timeliness improvement.

EIA collects energy data from respondents who are required to fill out survey forms. The more intuitive and understandable the forms, the higher quality the data. In 1998, EIA initiated three projects to redesign specific survey forms, one using focus groups and two using a technique called cognitive interviewing. This process involves respondents completing a survey with an interviewer while "thinking out loud," so the interviewer can see how they interact with the questionnaire and what meanings they get from terms and instructions. (Prior to 1998, EIA relied heavily on post-collection techniques, such as error checks and periodic expert reviews.) In June 1998, EIA used cognitive interviewing to test a redesign of the Manufacturing Energy Consumption Survey, prior to the 1999 data collection cycle. The revised version is longer but has a more intuitive design, and instructions printed throughout the survey directly in places where respondents need to read them (rather than in a separate booklet). In redesigning this survey, EIA conducted cognitive interviews at seven local manufacturing establishments, then revised the survey and pretested it. Respondents, who agreed to serve as pretest subjects, reported the revisions improved the survey design, the new format was easier to follow, and the additional length of the survey was not a concern.

EIA staff was trained in conducting cognitive interviews so these techniques can be used on other EIA data collections. In the near term, EIA plans to employ cognitive interviewing as a part of the information collection redesign efforts in the natural gas area. Building on these successes, EIA plans to make use of focus groups and cognitive interviewing as key processes in revamping energy surveys.

Increasing Customer Usage

EIA has engaged in an aggressive program to expand the availability of electronic information, upgrade energy data dissemination, and enhance coverage of energy information issues in the news media. This increased use of electronic technology (Internet, CD-ROM, etc.) for energy data dissemination has led to an explosive growth in the number of customers for our data, as well as increased the breadth of information distributed. For example, the growth in monthly users of EIA Web site is remarkable (see Figure 7 - note numbers of monthly users do not include EIA employees accessing the site). Rapid growth like that seen in the use of EIA's Web site access is evidenced in Web site file access. Of note, during 1997, EIA set a goal to increase the average number of unique monthly users of its web site by 20% annually, from a baseline of 37,000 users sessions. Between

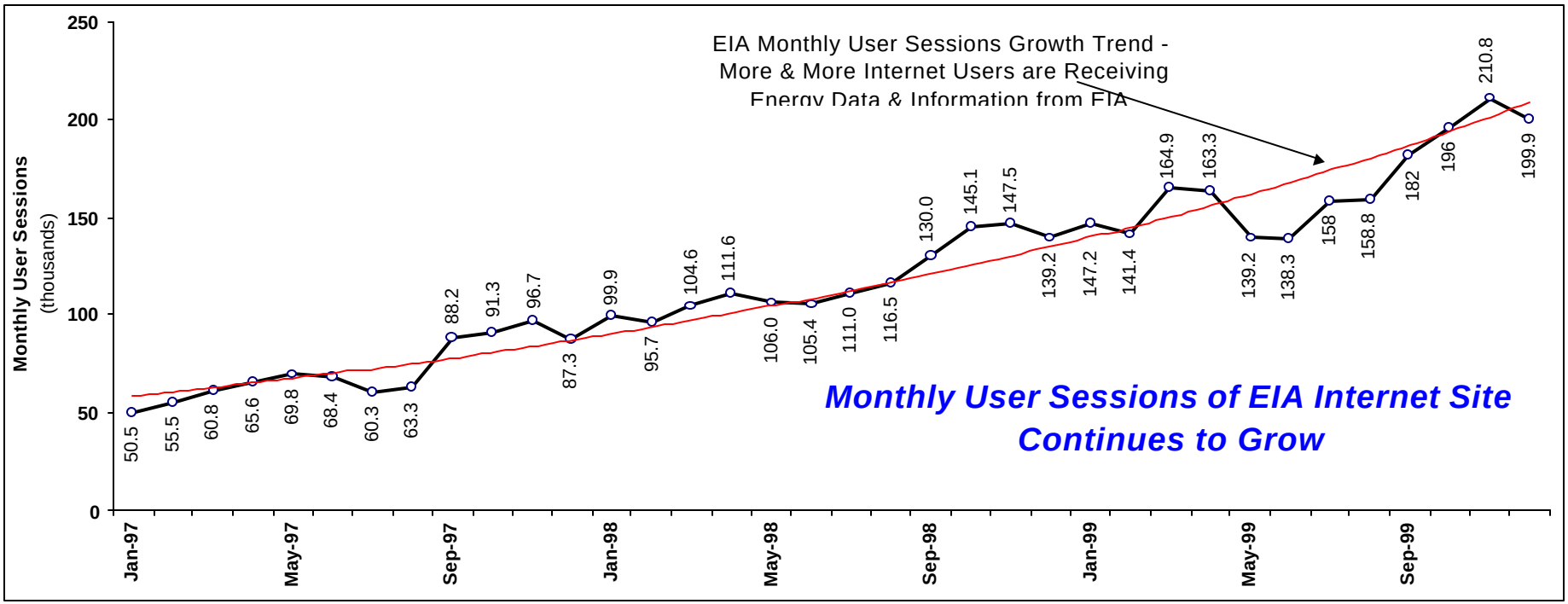

Figure 7

1996 to 1997 the growth in usage was 180%. By the end of 1997, EIA exceeded the goal with an average of 71,500 user sessions. By the end of 1998, EIA averaged 87,000 user sessions, again exceeding the goal. For 1999, EIA averaged 163,600 monthly user sessions, an increase of more than 64.7% when compared to the 1998 average monthly usage level. For December 1999 EIA was witnessing about 200,000 user sessions. For 1999, information downloaded from the EIA Web site averaged 94 gigabytes per month, or about 1.13 terabytes of energy information for the year. For December 1999, 1.4 million files were downloaded. This represents a 76% increase when compared to December 1998.

One result of the increase in the electronic availability of our information has been a dramatic increase in the number of customers contacting the National Energy Information Center for on-line support. For example, e-mail traffic is up nearly 114% between 1998 and 1999. Another result of our expanded use of electronic dissemination is a 35% reduction in the number of paper publications and a 50% reduction in publication printing costs since 1994, which results in avoiding more than $500,000 in expenditures per year.

EIA has dramatically increased the distribution of its information by becoming the dependable source of objective energy information for the news media. This has enabled our energy data to be widely use by the general public with minimal cost to the agency (Figure 8). In addition to the steady growth in media use of EIA information, public concern about price volatility in the gasoline and heating oil markets led to the increases in media citations in the spring of 1996, the winter of 1997, and the fall and winter of 1998-1999.

Another example of outcomes and impact, is the number of copies of EIA's recent brochure "Why Do Natural Gas Prices Fluctuate So Much?" being requested by natural gas companies for distribution to their customers. These natural gas companies see this brochure as an excellent way to explain to their customers why natural gas prices fluctuate. In addition, natural gas companies can note that this information was prepared by a non-biased source.

Perhaps the area most difficult to quantify is the impact of EIA's data on the policy development process. EIA has substantial evidence that our information and analyses are sought prior to legislative action. Most recently, as the restructuring of the electric power industry has moved to the front of the energy debate, EIA's briefing on how the industry works have been presented to more than 50 Congressional staff, principally from the Senate Energy and Natural Resources Committee. EIA's Administrator was requested to testify before the Energy and Power Subcommittee of the House of Representatives on future competitive electricity prices. EIA's brochure "The Restructuring of the Electric Power Industry - A Capsule of Issues and Events" which clarifies the complex issues involved, is one of the most popular files on our Web site with more than 2,000 printed copies distributed. EIA was requested by the Chairman and ranking minority member of the House Science Committee to prepare a study on the cost and economic impacts of proposed reductions in greenhouse gas emissions, in accordance with the Kyoto agreement. EIA believes the inclusion of our policy-neutral input on these major issues will help result in informed debate and sound policy decisions.

Of special note, EIA's Web site has won several awards for quality and content. Most recently, EIA's Web site was selected by *Government Executive* magazine as one of the best sixteen Federal Web sites for 1999, from 120 nominated web sites. In the announcement of the winners, *Government Executive* stated, "EIA is a tiny agency, so the comprehensiveness of its site - and its ease of navigation - amazed the judges. Everyone

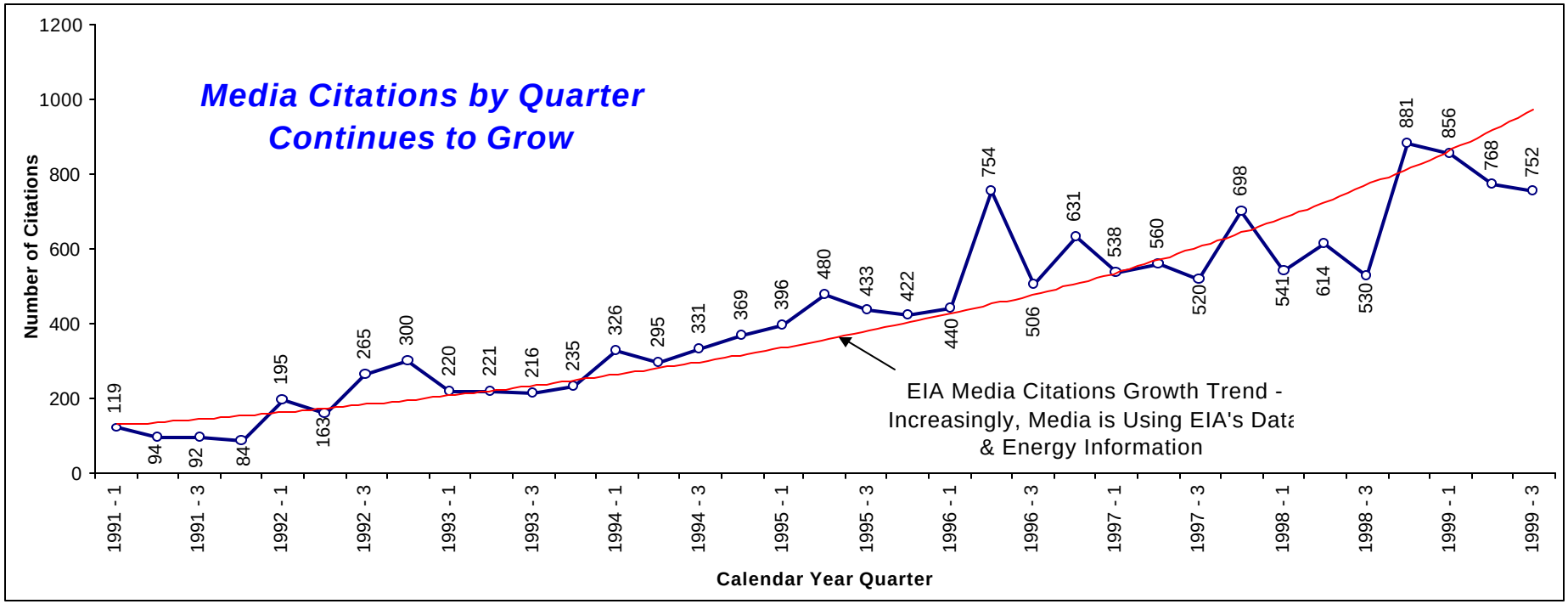

Figure 9

who works in the energy industry is well-served by this site." EIA also was commended for making full use of the power of e-mail by featuring e-mail notification lists for more than 30 different energy subjects.

In summary, EIA is serving a growing customer base, and achieving high levels of customer satisfaction with our energy data, analyses, forecasts, and timeliness. During FY 2001, EIA expects to receive 3 million inquires for energy information. To meet future customer requirements, EIA will need to leverage evolving information processing and communications technologies, explore and develop innovations to improve our capabilities, and align our resources to effectively meet the energy information needs of Government, industry, and the public.

DEPARTMENT OF ENERGY
FY 2001 CONGRESSIONAL BUDGET REQUEST
ENERGY INFORMATION ADMINISTRATION
(dollars in thousands)
PROGRAM FUNDING PROFILE
National Energy Information System

Activity	FY 1999 Enacted	FY 2000 Enacted [1]	FY 2001 Base	FY 2001 Request	Program Change Request vs. Base Dollar	Program Change Request vs. Base Percent
Oil and Gas						
Operating Expenses	$ 17,555	$ 18,197	$ 18,197	$ 19,249	$ 1,052	5.8%
Coal, Nuclear, Electric, and Alternate Fuels						
Operating Expenses	$ 9,979	$ 10,810	$ 10,810	$ 10,600	$ -210	-1.9%
Energy Markets and End Use						
Operating Expenses	$ 9,067	$ 9,845	$ 9,845	$ 10,355	$ 510	5.2%
Integrated Analysis and Forecasting						
Operating Expenses	$ 8,366	$ 9,112	$ 9,112	$ 9,122	$ 10	0.1%
Information Technology						
Operating Expenses	$ 9,795	$ 9,014	$ 9,014	$ 9,629	$ 615	6.8%
National Energy Information Center						
Operating Expenses	$ 2,199	$ 2,213	$ 2,213	$ 2,314	$ 101	4.6%
Statistics and Methods						
Operating Expenses	$ 2,255	$ 2,399	$ 2,399	$ 2,408	$ 9	0.4%
Resource Management						
Operating Expenses	$ 11,284	$ 10,778	$ 10,778	$ 11,323	$ 545	5.1%
SUBTOTAL	$ 70,500	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%
Use of Prior Year Balances [2]	- 315	- -	- -	- -	- -	- -
TOTAL	$ 70,185	$ 72,368	$ 72,368	$ 75,000	$ 2,632	3.6%